# LOUISIANA Conservationist

MARCH-APRIL, 1950

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# *Louisiana* CONSERVATIONIST

EARL K. LONG
*Governor of Louisiana*

ERNEST S. CLEMENTS
*Commissioner*

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*Editor*

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*Conservation Pledge*

I GIVE MY PLEDGE
AS AN AMERICAN
TO SAVE AND FAITHFULLY TO
DEFEND FROM WASTE
THE NATURAL RESOURCES OF
MY COUNTRY — ITS SOIL
AND MINERALS, ITS
FORESTS, WATERS,
AND WILDLIFE

DEPARTMENT OF WILD LIFE AND FISHERIES
DIVISION OF EDUCATION & PUBLICITY

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Permission for publication of all material in this issue is granted on condition that we receive marked copies and that credit is given for any illustration reproduced. Contributions and photographs will be welcomed. Manuscripts should be addressed to Editor, Louisiana Conservationist, 126 Civil Courts Bldg., New Orleans 16, La. The Louisiana Conservationist is always interested in pictures of game and fish catches, unusual hunting and fishing scenes, bird dogs, and in group pictures of hunting and fishing organizations.

VOL. 2, No. 7 - 8

# EDITORIAL

MARCH - APRIL, 1950

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Louisiana bobcat of the kind described by James Nelson Gowanloch in this issue.

### By Ernest S. Clements

*Commissioner of Wild Life and Fisheries*
*of Louisiana*

ENJOY the chase—forget the kill! More and more sportsmen are learning that most of the fun of hunting and fishing is getting good fellows together and having a wonderful time in the outdoors. When this spirit prevails the kill becomes entirely secondary. The principal reason the Grand Isle Tarpon Rodeo has become the amazing success it is year after year, is not because of the fact that great numbers of tarpon are caught. In fact very few tarpon are brought to boat during each of the three-day rodeos. But from its inception this piscatorial contest has engendered goodfellowship, good sportsmanship and a massing of good fellows for a three-day contest during which the size of the kill is very much a secondary feature.

Unfortunately some so-called sportsmen do not fall into this spirit of having fun. They are as indifferent in their attitude toward regulation of their sport as they are toward other regulations of law affecting their every-day existence. Some cheat a little here and there, others cheat a lot. Virtually everyone expresses himself as in favor of conservation, but few are at all sure just what they ARE for. Human nature being what it is, it very often takes either punishment, or at least the threat of punishment to enforce a semblence of conservation. We have been selfish so long we have often been conservationists only when it served our interests.

Conservation isn't improved habitat for wildlife; it isn't restocking; it isn't predator control; it isn't pollution control; it isn't better agriculture, and it isn't merely the wise use of our natural resources for making goods. It isn't any one of these things—its all of these things. It's not the parts—it's the whole.

Unless we can see the whole picture, and see it right now, we might as well forget conservation, because we don't know the meaning of the word. Proved conservation methods in use today would have been ridiculed loudly a half century ago. There was game then in any amount for everyone to shoot as much as he wanted. But as is usually the case when no curb is put on any activity, virtually everyone shot more than he wanted, more than he needed. As the years went on there was a gradual thinning of the game supply, but the hunting was still good. Finally, however, some began to take stock of this country's fish and game supply and the totals they arrived at were stunning.

For a time publications devoted solely to fishing and hunting refused to accept or mention the fact that our game supply was threatened, but after a time outdoors editors began to develop a conscience, and an awareness of facts. Since then they have joined wholeheartedly in the preaching of conservation and the teaching of good sportsmanship.

Today we are at the crossroads. Sportsmen, businessmen, professional men, farmers and politicians are all for conservation but they have diverse viewpoints. They are all for it but they can't agree as to what it is. But we must all agree that we have been selfish too long, and that real conservation means the greatest good for the most people.

### DO YOU LIKE PICTURES?

So do we! Hunting pictures . . . fishing pictures . . . pictures of the game you bagged . . . pictures of your dogs . . . pictures of yourself or your friends on a hunt or fishing trip . . . in fact any kind of good picture that has a bearing on field or stream sports.

Mail them to EDITOR, LOUISIANA CONSERVATIONIST, 126 Civil Courts Bldg., New Orleans, and we'll return 'em to you as soon as we've been able to use them.

# RING-NECKED PHEASANT AS GAME BIRD

### By James Nelson Gowanloch

*Chief Biologist, Louisiana Department of Wild Life and Fisheries.*

THIS article has four purposes, all of which can be only presented in the most compact of discussions: First, to relate something of the introduction and spread of the Ring-Necked Pheasant (the technical name of the which is **Phasianus colchicus torquatus**) in North America; second, to discuss the present ascertained United States range of this species as a game bird; third, to urge legislative action whereby the Pheasant be removed from the list of completely protected birds so that the artificial rearing or the management of private Pheasant hunting enterprises can be legalized; and, fourth, to provide a brief bibliography of useful sources of information wherefrom those interested in acquiring further information concerning Pheasants and Pheasant culture can with profit secure the desired data.

The recent success of private hunting operations with privately reared birds in Mississippi has brought about the implication that the Louisiana Department of Wild Life and Fisheries has been ignorantly neglecting the possibilities of this magnificent game bird as a species valuable for introduction in our state. Any Louisiana hunter who has hunted Pheasants in their center of greatest concentration in the United States, the Dakotas, naturally is confused when he hears of Pheasants being raised successfully in our latitude and yet notes that this species is omitted from our game program.

Far from being ignorant of the status of the Ring-Necked Pheasant, this department (then the Louisiana Department of Conservation) first began the experimental raising of Pheasants on Avery Island thirty-five years ago when, under date of March 17, 1916 (Conservation Commission of Louisiana, 1916), the late M. E. A. McIlhenny, in his report on the State Game Farm, related that twenty pairs of Pheasants were secured as breeding stock in 1915 and suggested the Pheasant as a possible source of profit if artificially raised by farmers and marketed. Two hundred and twenty-seven Pheasants were reared the first year. This first report, filled with optimism, did, however, emphasize the value of the Pheasant as a cultured bird rather than a game bird in the wild.

It should be noted with care that the subsequent report, "The Report of the State Game Farm," (Conservation Commission of Louisiana, 1918) Mr. McIlhenny makes no mention of any success of the Pheasant as a game bird, but again, and quite properly, emphasizes that the Pheasant could be reared artificially with success and the young birds and the eggs distributed to farmers throughout the state who could privately rear them.

It is particularly to be noted that no mention whatever is made in the next Biennial Report (4th Biennial Report) of either the Ring-Necked Pheasant or the game farm.

This pioneer exploratory enterprise on

the part of the State of Louisiana was, even if not successful, commendable.

Oberholser reporting in 1938 (see bibliography at the end of article) stated, "Attempts to introduce this species into Louisiana have apparently so far been unsuccessful, as the bird has not yet been fully established in any locality. It is, therefore, not to be considered as a part of the State fauna. The birds have been introduced on Marsh Island, also in La Salle Parish, and on the State Forest, but so far as the writer is aware there are no breeding birds in the wild state now left at any of these localities."

Now, to revert to the history of the Ring-Necked Pheasant. The original range of the Pheasant (Beebe, 1818-1922) was eastern and southeastern China from Canton to Hunan north to the lower Yangtse and north to Peking.

Beebe, 1928, recognized twenty-three sub-species of Ring-Necked Pheasants. The latest international authority (Peters, 1932) recognizes forty-two sub-species. However, the birds introduced into America are regarded as a mixture of a number of the described sub-species or "races". Pheasant stock introduced in the United States came from England, where they were introduced from Asia Minor one thousand and five years ago at the time of the Roman Conquest (Pearson, Brimley anf Brimley, 1942). Among the earliest attempts to introduce the Pheasant into North America was that made by Benjamin Franklin's son-in-law, Richard Bache (Hicks, 1938). It was introduced (Freidmann, 1946) in New Hampshire in 1790, New Jersey in 1800, California in 1857 and Oregon in 1881. Friedmann states further, "Introduced now and fairly well established in approximately the northern half of the United States and in southern Canada." He further gives the present range as extending from portions of southern Canada and southwestern Maine south to Maryland, Pennsylvania, Ohio, Kentucky, Kansas, Colorado and California. Phillips, 1928, a profound student of the introduction of foreign birds into the United States, remarked at that time that although the Pheasant thrives in the North, south of Baltimore and Washington its introduction was until then unsuccessful since "the stock does not hold out long if thrown on its own resources."

The reader is referred to Bent, 1932, for a fine survey of the life history of the Pheasant.

Here reproduced from Gresh is a map showing the approximate range of the occurrence of the Pheasant as a game bird in the United States. A glance will show how far north the successful range is from Louisiana.

The validity of this approximate mapping is sustained by the recent extremely important report, "Ten Years of Pittman-Robertson Wildlife Restoration," (Rutherford, 1949). Pittman-Robertson funds totalled a Federal revenue of $48,175,431 collected between July 1, 1938 and June 30, 1948 as an excise tax on sporting arms and ammunition. This vast sum, matched by participating states in the ratio of $1.00 State money to $3.00 Federal money, was expent for game improvement and restoration. Administrative officials controlling these activities represented the top-flight experts in the country and each project was subject to the most careful scrutiny. It is obvious, therefore, that any reasonable possibility of development of the Pheasant as an introduced game bird in the wild in the Southern States would not have been overlooked. Rutherford states, "This exotic (the Ring-Necked Pheasant) has succeeded so well in the northern agricultural regions that it now has surpassed native species in importance in wide sections of the country." Pittman-Robertson Pheasant projects were carried on notably in the following states: Michigan, Maine, Iowa, Utah, Washington, Idaho, Nebraska, North Dakota, South Dakota, Wisconsin, Ohio and Pennsylvania.

The male Ring-Necked Pheasant. This beautiful introduced species, one of the handsomest game birds in the world, has become astonishingly abundant in the Dakotas and adjacent states. Nowhere in the Deep South has it become successful as a game bird where released "on its own."

Of utmost significance is Rutherford's further remark, "Heavy stocking of Pheasants from game farms is still being done in some States, but studies have shown that most of this is time and money wasted, unless the birds are released immediately ahead of the gun. This latter practice is not restoration, and cannot be approved as a Pittman-Robertson activity."

No clearer statement of the futility of breeding Pheasants (and then turning them loose in a habitat where they will not survive and have never been demonstrated to survive under completely wild conditions and in uncontrolled areas) could possibly be found, yet this statement is made by the one person who more than any other has surveyed comprehensively ten years of game restoration work carried out throughout the entire United States at a total cost of over $64,000,000 Federal and State funds in the ratio of three to one.

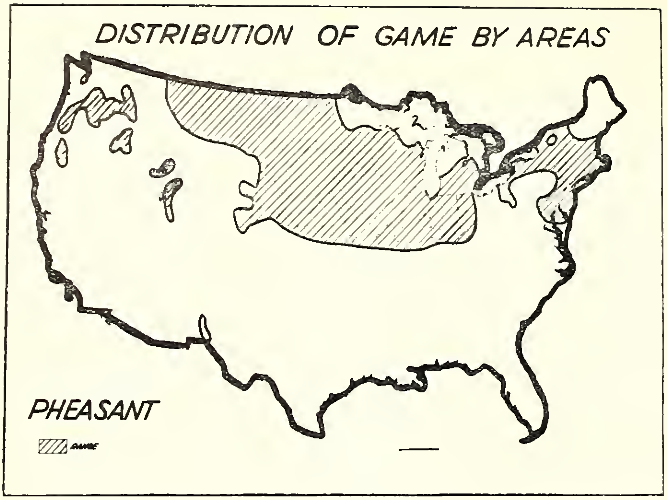
It is difficult to comprehend the extraordinary success of Pheasants in certain of the Northern States. South Dakota, (Gresh) presumably reporting for the year 1945, gave the kill of Pheasants in South Dakota alone for the last single reported year as 6,350,000. It is almost unbelievable that all of these Pheasants came from 2,300 birds which South Dakota purchased from an Illinois game farm and introduced into South Dakota. South Dakota has never owned a game farm. Compare with this the reported kill in Louisiana for the same year of 1,610,000 ducks and 25,000 geese. The following are the Pheasant kills reported for the same year for these states: Illinois 270,000, Iowa 700,000, Michigan 1,401,000, North Dakota 1,445,000 and Nebraska 2,000,000.

Pheasants have been at various time introduced by various people for direct release in the State of Louisiana and, as far as the writer has been able to ascertain, this species when put on its own, fails to succeed. What factor or factors destroy it is not known, but the writer surmises that one element of importance may possibly be the existence of ticks and red bugs, the absence or presence of which apparently has relationship to abundance of certain game species. Problems of the mysterious limitation of animal species are very numerous.

Take, for example, the Eastern Diamondback Rattlesnake, which occurs in Mississippi within sixty miles of the Louisiana border and of which only a single specimen has been taken in our state.

The second example, even more striking, is the case of the true Northern Smallmouth Bass, which occurs seventy miles north of Louisiana in watersheds in Arkansas whose streams flow into our state, and yet the writer has not been able in twenty years to find a single authentic Louisiana specimen (our Smallmouth Bass is the Kentucky or Spotted Bass, a different species).

It may be significant to note ([illegible], 1945) that in 1931 the State Game Commission of Mississippi [illegible] [illegible]ty-three Pheasants in the State Teachers' College



Game range of the Ring-Necked Pheasant. This map (after Gresh, see bibliography at end of article) based on most recent information shows clearly the areas in the United States where the Ring-Necked Pheasant is shot as a game bird in the wild.

Refuge in Forrest County and in 1938 introduced an additional one hundred birds into Mississippi and as a result of these experiments stated, "There is little information available that permits a discussion of factors entering into the failure of these birds to survive, but the experiments are known to have discouraged any further expenditure of public funds to stock pheasants. These birds seem not to be able to hold their own under conditions existing in this State."

Two other unsuccessful Deep South Pheasant introductions are reported (Phillips, 1928) as follows: "On Jekyl Island, off the coast of Georgia, for instance, pheasants were tried out many years ago, even before 1888, but none now remain. The same is true of the region about Thomasville, Ga. They had a fair trial in Alabama about 15 years ago."

It should perhaps be added that another species of Pheasant, our common Guinea Hen, the official book name is the Grey Breasted Helmet Game-Fowl, (the technical name of which is **Numida maleagris galeata**) a native of Africa and Madagascar, has been introduced into Cuba and other West Indian Islands where, established as a wild bird, it now provides good hunting. The familiar wandering habits of the Guinea Hen have certainly given it every chance to become acclimated to Louisiana which, whatever the factor or factors that prevent this, it has never done. Still further, as a concluding remark, it should be noted that our breeds of barnyard chickens are descended from another member of the Pheasant family, the Jungle Fowl of India, **Gallus gallus bankiva**, and they likewise, as well as the original wild jungle fowl, have never successfully taken completely to the woods in the United States of America.

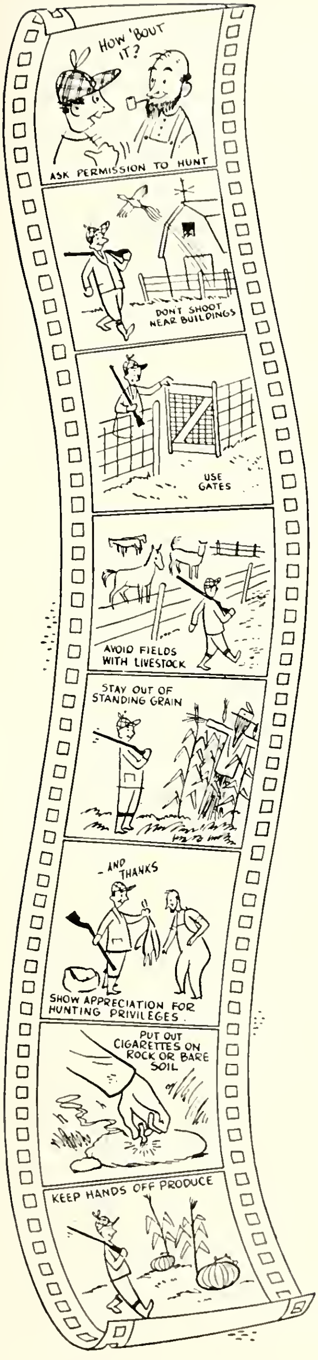
The writer strongly urges legislative action which will remove the Pheasant from the protected list and thereby make possible the private artificial rearing of these magnificant birds for both food and further under properly controlled conditions Pheasants provide private game shooting. Notable success has been attained by certain such operations in the Deep South, but such success should mislead no sportsman into urging the expenditure of available public funds for game rehabilitation or the indiscriminate release of purchased or game farm reared birds into the wild. It is perfectly evident that game management, if economically conducted, must examine with greatest care the known facts of the success of game species in the areas which will form their habitat. The whole cost accounting must be evaluated. It is justly comparable to state correctly that if you do not have to consider your budget, you can most certainly raise bananas successfully at the North Pole.

No one who has eaten Pheasant properly prepared will forget how delicate is this bird. The price they command is high when sold to topflight restaurants. The techniques necessary for raising Pheasants in captivity have all been worked out with great care (Ligon, 1946, "Pheasant Breeding Manual," 1936, More Game Birds in America). The amount of research work that has been done on game farm rearing of Pheasants under artificial conditions is simply enormous. The writer will be glad at any time to provide additional information as to sources describing successful techniques. The farmer who happens to be interested in game bird raising could, without doubt, find in the raising of Ring-Necked Pheasants, a fascinating hobby. Therefore, in the opinion of the writer, it would be desirable to legalize such operations as soon as is possible.

The purpose of the appended bibliography is to serve as a guide to authoritative sources of Pheasant information, the

*(Continued on Page 25)*

D. H. Courtney, of Caspiana, La., with some of the 1,164 crows and chicken hawks he has killed since 1940.


HOW 'BOUT IT?
ASK PERMISSION TO HUNT
DON'T SHOOT NEAR BUILDINGS
USE GATES
AVOID FIELDS WITH LIVESTOCK
STAY OUT OF STANDING GRAIN
- AND THANKS
SHOW APPRECIATION FOR HUNTING PRIVILEGES
PUT OUT CIGARETTES ON ROCK OR BARE SOIL
KEEP HANDS OFF PRODUCE

# FARMER-HUNTER "TRADE"

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By Vernon W. Oie, Jr.

YOU WANT a place to hunt.

Not "you" collectively, but you personally. We mean you, John Q. Hunter. Opening day of the shooting season finds you, gun, dog, and all, vainly searching for some place where you can kill a couple of birds or a rabbit or two. Lands are posted. Requests for permission to hunt on a farm net you only a cold stare and an emphatic NO. At the end of the day you come home with no game and a tendency to throw rocks at anyone who even mentions hunting.

So what are you going to do about it? Think it through and you will see the answer for yourself. In the first place you never got anything for nothing in your life, did you? Well, you won't start now. Hunting on a farmer's land is going to cost you, just like anything else. Not necessary in money, but in good will, cooperation, and a little time and courtesy.

Don't wait until the day before hunting season to ask permission to shoot. Get out and see the farmer the spring and summer before the season opens. Do something to **earn** permission to hunt. Maybe the farmer's wife likes candy or pastry. Maybe you can fix him up with a good place to fish. In short, when the season opens you should be able to answer the query "Where do you hunt?" by saying "Oh—a **friend** of mine owns a farm out in Whosis county. That's where I hunt."

Now we come to "you" collectively—all of you. This is where the bind starts. You personally are all set, but what about the other guy. He's still tearing his hair and hurling epithets at the farmers, the Conservation Department, other hunters, and anyone else whom he even remotely associates with his present plight.

At this point you find yourself in a pretty good position to do something for him. Sit him in a nice big chair and ask him if he ever got anything for nothing. When he says no, you can start your little lecture on how to make friends with the farmer. He will listen attentively, get the idea, and then really start to operate.

Now there are two of you who are all fixed up, and the time is ripe to strike. At your next sportsmen's club meeting the two of you will introduce a few resolutions to really turn this thing into a large scale operation. The resolutions will read something like this.

"Be it enacted by the Rod, Gun, Dog, and Marching Club that:

1. We will purchase from the Department of Conservation or some local nursery an infinite number of trees and shrubs for reforestation and cover restoration on the farms of Jones, Doe, Brown, Black, Green and so on, ad infinitum.

2. We will furnish said farmers with and help them to post signs saying "Hunting by Permission Only" rather than "No Hunting."

3. We will invite farmers Jones, Doe, Brown, Black, Green, etc., as well as any other interested farmers or landowners to each and every fish feed or game dinner presented by this club.

4. After each day's hunt, we will offer to share the game we have killed with the farmer on whose land it was bagged.

5. We will obey all rules, written and unwritten, that govern the actions of all good hunters.

Well, there it is. That great bugaboo called "Farmer — Sportsman Relations" about which there has been so many arguments, discussions, and learned treatises can be knocked into a cocked hat by liberal applications of common sense and foresight.

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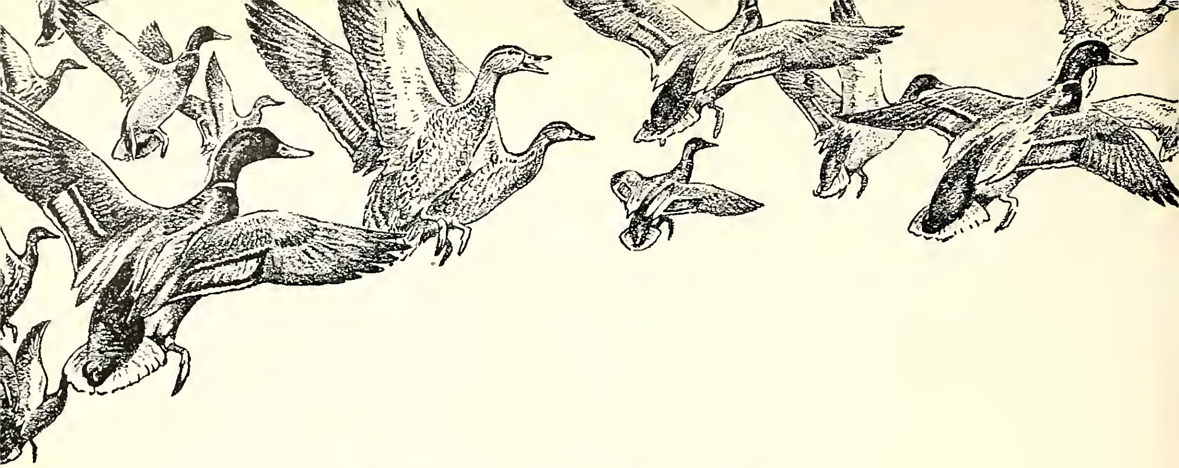
Whales often "hold their breaths" for as long as fifty minutes. They, like all other mammals, however, can drown if they get water in their lungs.

Catch of bar fish made by Leaton M. Ryder, of Alexandria, La., on Catahoula Lake.



# MIRACLE OF THE FLYWAYS

*(From The Missouri Conservationist.)*

DO YOU REMEMBER late October and early November, when the sunset faded behind hazy clouds? In the country, dry oak leaves rustled across the ground as you shrugged into your jacket. On the early-lighted city streets, you tightened your coat against the chill. In the small towns, you locked your shop door and then looked up suddenly. From out of space—far beyond farm woodland and civic spires—came a faint, familiar music of the wild. You listened and watched, caught up in an ancient magic and an age-old longing, as formations of waterfowl dotted the evening sky.

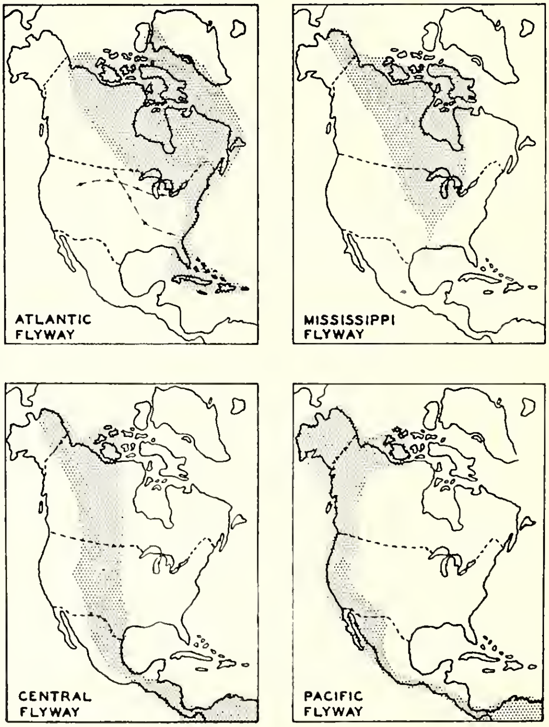
And all through the long fall night, sifting into uneasy sleep, the clamor of the ducks and geese was heard. You remembered, as a farmer, that final provisions must be made for feeding livestock through the winter. You listened, as a city man, to that chorus of wild freedom, and dreams lifted you from the rut of routine that penned you in street-canyons. And over your head, that autumn night, streamed one of Nature's greatest pageants, replete in splendor and mystery.

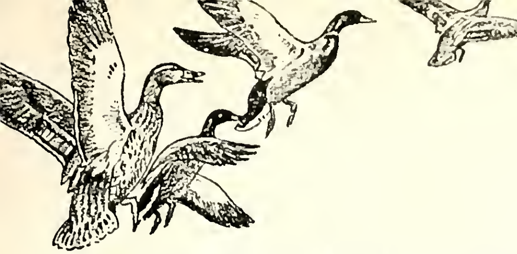
Now the flight has mostly passed over, though migratory waterfowl still linger. The shooting season ended, though the guns are booming to the south. But after the hunting still remains the wonder.

Man has always wondered at the miracle of waterfowl migration. For more than 3500 years he has recorded his questions: What is the stimulus that moves millions of birds south for winter and north again to nest in the spring? From what distances do the birds come and what powers enable them to wing hundreds or thousands of miles non-stop? Flying by dark of night or in dense fog how can they chart a course true as a ship's compass?

To test their homing instinct and uncanny sense of orientation, waterfowl have been caught, banded and then released at some far-removed point. Invariably they were found later in their native haunts. It all started, biologists believe, from a search for food. Somewhere in the dim prehistoric past, birds found a solution to seasonal food scarcities by moving about. Influenced by regular seasonal changes such movements became habitual and eventually instinctive. Also instinctive became the impulse of migrants to return devotedly to the same nesting and wintering grounds, following year after year the

**MAJOR WATERFOWL FLYWAYS OF NORTH AMERICA**





same routes of travel. In North America there are four principal migration routes: the Atlantic, Mississippi, Central and Pacific flyways.

Some species of smaller birds migrate only short distances; a few commute between nesting sites in mountain ranges to winter quarters in nearby warm valleys. Others, such as our ducks and geese, cover distances up to and over 3000 miles. Most species of migratory waterfowl can travel 250 to 500 miles in a single 10-hour day, but frequently stop to linger along the flyways when weather and food conditions are favorable. The blue goose flies from its nesting grounds in far-away Baffin Island to the coastal marshes of Louisiana with but a single scheduled stop-over at James Bay. Champion of the long-distance fliers, though, is the Artic tern which nests practically on top of the north pole then flies 11,000 miles to spend its winters in the frozen Antarctic region.

Despite such flights seldom do migratory birds suffer from exhaustion. Their entire body structure from the feathers to the heart is simply built "to take it." No man-made machine can compare with the efficiency and extremely conservative use of energy as is displayed, for instance, by the golden plover during its 2400-mile non-stop Atlantic hop from Nova Scotia to South America. Requiring over 48 hours for the trip, the plover's fuel consumption is less than two ounces of body fat. To be as economical, a 1000-pound airplane would have to get 160 miles to the gallon of gas.

But of all the mysteries of the flyways, most inexplicable is the unerring certainty with which birds cover thousands of miles of land and sea to alight in exactly the same spot where they spent the previous summer or winter. A mallard duck returned for eight consecutive years to occupy the same nest site, which curiously enough was a box on the roof of a barn on a Nebraska farm. A flock of murres flying in a dense fog to nesting sites on Bogoslof Island in the Bering Sea passed stern to stem directly over a ship heading to the same point. The ship was aided by a compass, but what power enabled the murres to charter their exacting course? Perhaps they too possess a compass—a sense of magnetic direction. Strangely enough, recent observations indicate that magnetic behavior is a governing influence in the flight orientation of birds.

We may never know all the answers but during recent years we have learned many facts about migratory fowl—facts which have proven helpful to both wildlife and man. Largely through the Continental Migratory Bird Treaty of 1916, migrants are now given protection all along their routes. Efforts are constantly being made in Missouri and other states to restore food and resting areas and to encourage once again nesting of waterfowl efforts are rewarded manyfold, for a world unstable to wildlife is unstable to man. From the Eskimo of the frozen north to the farmer, city worker and hunter, these mysterious flights mean much more than sport or food—they are a part of life, eagerly anticipated and joyously greeted.

—**(Ralph Pogue).**

# WHY DO YOU GO FISHING?

**By Ivan Merrill**

*(Reprinted from The East St. Louis Journal.)*

DURING the week a question was fired point blank which gave birth to this column. It was "Why do you fish?"

The answer that can be given to that one would fill a book, not a small skimpy thing but a voluminous edition with an ancestry of editions numbering into infinity. But to boil it down into column form we can best do so by giving the three principal causes.

Perhaps Edgar Guest did the situation justice when he penned the words "When a fellow goes fishing he's done with his care. Life's small irritations can't follow him there."

Truer words never were spoken. It is an escape from the bondage of being forever at the task of trying to make just a little better living than our neighbors. An escape from false pretense and sham, a reprieve from the monotony of staid society and the set tasks whereby we are permitted to eke out a living.

It is an opportunity to run wild, to let the soul soak up some of the spiritual as well as the more concrete gifts that are presented to those that would take advantage of a day astream. It is a chance to brush away the cobwebs of wearisome punctuality, a chance to come into the full realization that life is more than fancy dreams, idle talk and monied schemes. More than work and sweat and toil, accumulating worldly spoils. It is an opportunity to reverently partake of the freedom with which we in this country are blessed.

That in itself is enough to send a man fishing, but there is more. One cannot spend a day fishing without literally drinking in a million pictures, none of which even the old masters of the brush ever found it possible to duplicate, nor will those of a generation yet to come, for these are some of the secret treasures which man can view, not copy.

To optical satisfaction we will add the soothing contentment of the songs of hundreds of birds. None exactly alike but harmonizing so smoothly that one is forced into the realization that the Maestro, the conductor of nature's symphony, is a master of all things.

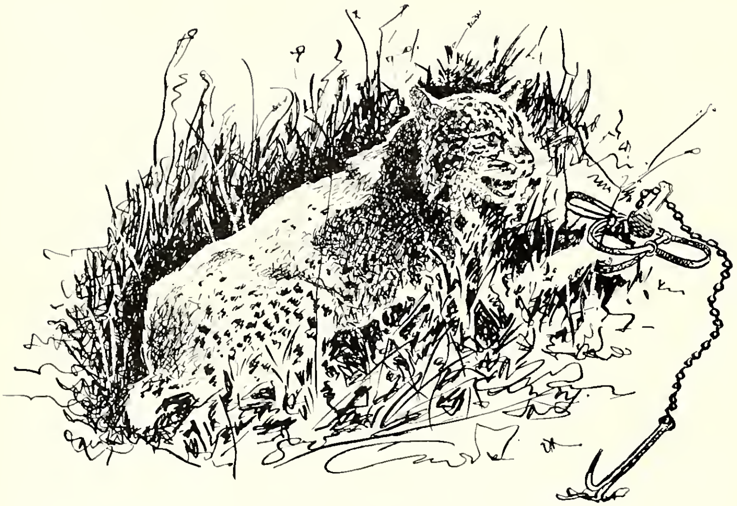
To these two we can add the actual act of fishing wherein every fiber of one's body is set tingling when a customer takes upon himself the task of outwitting the fisherman. Said customer goes dashing away under the pressure of screaming reel and arching rod to bore mightily into the brush and rocks, or he goes sky rocketing in his fight for freedom. It is good to feel the twisting, gyrating vibrations of wary bluegill as it frantically tries to keep out of the frying pan.

It is only human for man to pit his skill against that of the creatures of nature, man has been doing that since the beginning of time and as long as there be fish in our waters it will continue to be so. We are submitting to an instinctive trait, which at one time was part and parcel of living but now is a fulfillment of inherited desire.

A man doesn't actually fish just to catch them. He fishes for the thrill of battle, for what he may see and hear and to get away from the monotonous task of proper living. But if one can see no beauty in a flower bending to the breeze nor hear no music through the rustling leaves, nor cannot feel that sunset is the benediction hour, then he best keep to his work, to his books, his cups or whatever it be that such men do in their leisure hours for it is a sacrilege to take from nature and not at least return a full measure of devotion in her behalf.

The small water ouzel, a bird that likes water insects, "flies" under water, using the same wing motions that other birds employ in the air. The ouzel walks about on the bottom of a stream as easily as other birds walk on land. Its feathers are so thick that the body never becomes wet.

# BOBCAT — PREDATOR



**By James Nelson Gowanloch**

*Chief Biologist, Louisiana Department of Wild Life and Fisheries.*

THE LONG RANGE program for the protection and restoration of game fish, game birds and game animals in Louisiana is based upon the fundamental principles that the mere release or "stocking" of game is a waste of money unless the areas in which such carefully secured game stock is placed are suitable for the welfare of such game.

All game animals, like all other animals, must have for their present and subsequent success three essentials: first, food; second, shelter; and, third, the ability to bring up their families or, in technical parlance, "a high degree of reproductive success."

Louisiana offers in very many of its areas abundant food.

Louisiana because of its present stage of industrialization still provides vast areas of shelter outside of the agriculturally exploited areas as well as shelter devised by thoughtful farmers cooperative with the Department of Wild Life and Fisheries, who can still without impairing their own agricultural interests provide useful housing for quail, for rabbits, for largemouth black bass ("Green Trout") and other quarry of the sportsman.

The weakest link in this necessary chain of control in the rehabilitation of game is "reproductive success." Unless game stock replaces itself with an equal number of game stock, any game program is doomed to failure since, as that wise gentleman, Benjamin Franklin, said, "One simply cannot continue to take meal out of the barrel without suddenly finding that you have reached the bottom of the barrel."

Commissioner Ernest S. Clements in the beginning of his program emphasized one of the most dangerous elements in this third, the weakest link, of game propagation, namely, game habitat preparation must be cared for by the elimination of predators.

There is utterly no use in securing expensive fish, birds or mammals and turning them loose in an enterprise that will simply mean fattening up smug predators.

It is the purpose of this article to discuss one of the worst of these evil elements of any game program, namely, the Bobcat.

That fine phrase that in "horse operas" one hears through a mist of smoking sixguns, "He can lick his weight in wildcats," is, if anything, an understatement.

A Bobcat looks somewhat like an overgrown, somewhat tailored house cat with its tail chopped off, but if anybody confuses the tolerant docility of the one with the vicious fury of the other, he is quite unfamiliar with **Lynx rufus floridanus**, which is the scientific name of our particular Bobcat.

Commissioner Clements' estimate of the role of the Bobcat as one of our worst destroyers of such valuable game as quail, the turkey and the white-tailed deer was recently well confirmed when the most eminent national authority on these subjects, Stanley P. Young, an old friend of the writer, paid a visit to Louisiana and discussed these matters.

Stanley P. Young, who is the outstanding recognized source of information concerning all predatory animals as an official of the United States Fish and Willdlife Service (United States Department of the Interior and its predecessor, the Bureau of Biological Survey), has occupied thirty-one years in the study of these problems, is the author of the definitive monographs already published by the American Wildlife Institute, "The Wolves of North-America" and "The Puma, Mysterious American Cat," the (in press) volume on the coyote and is one of the authors of the forthcoming volumes, one on the white-tailed deer (our deer) and one on the mule deer (the common western deer). He is also author of the Federal Government publication, "Hints on Bobcat Trapping," the use of which has resulted in the assassination of unknown thousands of these dangerous predators.

Stanley Young on his recent visit was on his way back to Washington from his sixty-fourth return trip devoted to such predator studies across the entire continent.

It is the purpose of this necessarily brief discussion to set down some few facts concerning the life history of the Bobcat, its importance as a predator and methods of its control. No attempt is made to describe the animal because anybody who has had the privilege of personal social contacts with an uninhibited Bobcat will certainly never forget the experience and, further, because no space is here for such purpose.

Bobcats are stealthy, vicious animals, often heard, seldom seen. They are cousins of the northern Canada Lynx which is distinguished by its larger feet ("snow shoes") and the Lynx's sharp disdain for man as a neighbor. The Bobcat, less in size than the Lynx (thirty-eight inches with a six inch tail and a height of fifteen inches as against the Lynx's three foot length and four inch tail and a height of eighteen inches), nevertheless reaches the equivalent weight of forty pounds.

The Bobcat unlike the Lynx is astute enough to live near man and feed at man's table. The Lynx ranges east of the Mississippi only south to New York and northern Michigan; the Bobcat lives in woods or brushy country, and in Louisiana also in swampy areas, from Nova Scotia to British Columbia south to Florida and California. Previously ten subspecies ("geographical races") have been described but Young, who has made a careful study of

Bobcat "races" believes that certain eastern areas (the Piedmont) differ.

Dr. George H. Lowery, Jr., the authority on the distribution of Louisiana mammals, states that our common Louisiana Bobcat is the so-called Florida Bobcat (**Lynx rufus floridanus**) to which he gives the range as "fairly common throughout the alluvial swamps of eastern, southern and southeastern Louisiana." One record of another "race," the Texas Bobcat (**Lynx rufus texensis**) is reported by him from Natchitoches Parish. It should be noted that the Bobcat belongs to the same family, the cat family (Felidae), to which belong our domestic cat (a most destructive predator of game) and also the Puma or Mountain Lion, which apparently may still survive in wild river bottom areas of our State.

The viciousness of the Bobcat as a predator is terrific.

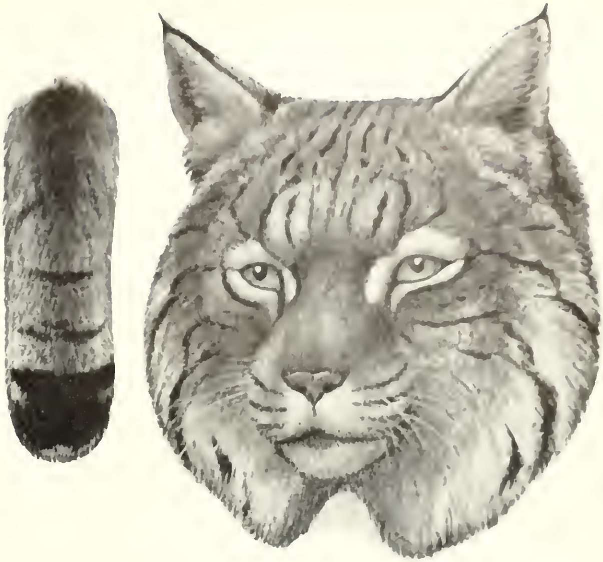
Bobcats congregate and flourish where the food supply is high, where game is abundant or where, for example, in the Deep South, wild hogs are numerous and provide abundant food. It is recorded that a single Bobcat killed thirty-eight lambs in a single night. This extraordinary performance was accomplished because of the stealth of the predator, each lamb being destroyed by a single characteristic bite on the back of the neck or head and then pulled down. The other unalarmed lambs are then attended to until this raid of the flock has been completed and the unused food left behind.

The Bobcat is capable of destroying efficiently even adult white-tailed deer, our Louisiana deer. A twenty pound Bobcat has been recorded as having killed a two hundred pound buck. Fawns are clearly easier prey. The attack technique when a full-grown deer is concerned is that the Bobcat leaps on the deer's back, after cautiously trailing its prey, bites through the jugular vein, often high in the throat, and stays with its dying victim. One case is noted where Bobcat and buck deer fought for five hours before the deer was killed.

Bobcats are one of the worst enemies of one of the finest game birds of North America, the wild turkey, which Commissioner Clements is trying to restore for the sportsmen of this State. Because of their ability to climb trees, Bobcats can sate their appetites for domestic turkeys as indicated by one example where a flock of twelve fine, large domestic turkeys quite dumbly took to roosting in low trees and in one night, Bobcats killed eleven.

The technique of the Bobcat in stalking the wild turkey is thus described by acute observers:

"The method of stalking used by both the bobcat . . . is well illustrated by the following observations. On November 21, 1939, a turkey hunter flushed a flock of wild turkeys near Crummets Mill, Highland County, and was yelping them when he heard something stealthily approaching him. Assuming that the approaching animal was a turkey returning to his yelping, the hunter yelped once more very quiety and then awaited development. After several minutes of carefully watching the area where he last heard the movement in the leaves, the hunter observed a bobcat stealthily approaching and searching the region carefully, apparently looking for the yelping turkey. The hunter waited patiently and when the bobcat was within gun shot, he killed it."



The tail and the face of a Bobcat. (After Hamilton.)

Bobcats kill and eat almost any available game or domestic animals, but educated Bobcats pay no attention to skunks. Skunk attacks must be ascribed either to young Bobcats or Bobcats that are mad with hunger. The Bobcat apparently uses its keen eyesight rather more than its still really good sense of smell.

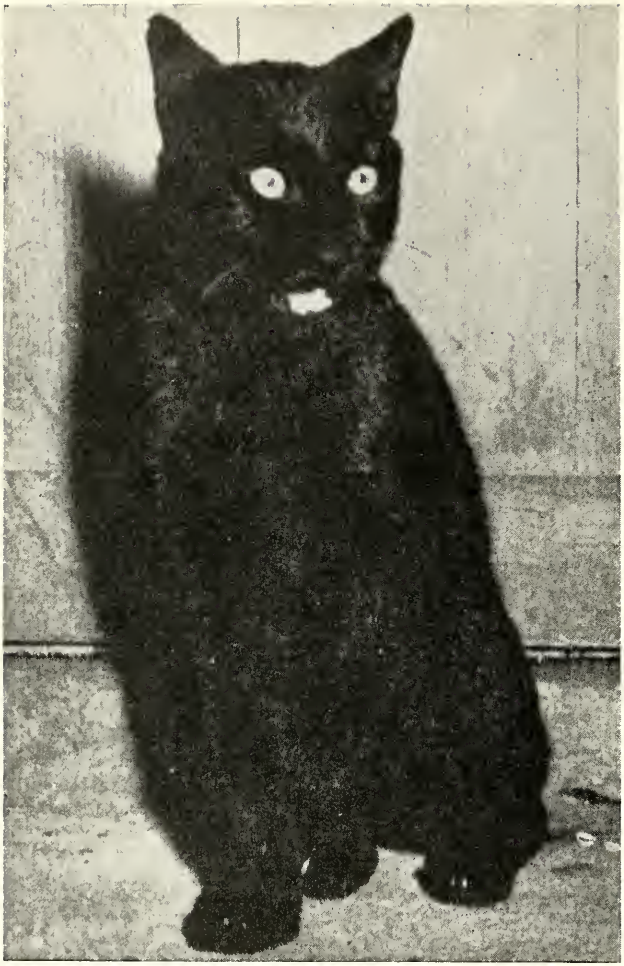
Bobcats are seldom seen because of their ability in concealing themselves and their dominantly nocturnal habits. Their motions, oddly enough, are also "bobbing," as well described by one observer as "bounding away with almost rabbitlike motions, rather than with the smooth, soft running of the bushy-tailed animals, such as foxes and coyotes. Even at a distance they may be distinguished by their bobbing motion as they run. Though they show considerable speed for a short distance, they can not continue a long rapid flight. Usually they are quickly treed or run to cover by an ordinary dog and on good ground are easily overtaken by a man on horseback. Rabbitlike, they generally lie closely and depend on seclusion rather than flight."

The life history of the Bobcat can be compactly described.

Bobcats mate early in the year. The young, one to four of them, being born about fifty days later.

Usually relatively silent and self-effacing, the Bobcat's love life elevates it to a vocal pre-eminence for, as well described, Bobcats "mate in January to late February. At this time, the animals out-scream themselves. They squall and yowl like overgrown alley cats. They have a varied repertoire, with astounding range and volume. As soon as a male has achieved results from a successful serenade, he goes on his solitary way to further vocal and amorous triumph, that is, if he can find another female that is free or can be taken away from her current mate. As a rule, the bobcat is a rather silent animal. When approached in a trap it first growls, then, baring its teeth, spits and hisses ferociously."

The tabby Bobcat feeds her young, which remain blind for nine days, for at least two months, while the tom Bobcat stays at home and helps her care for them. Kitten Bobcats are easily tamed and by the first Autumn of their lives weight eight to twelve pounds, but thereafter they change their weight and their dispositions. They may even begin these changes earlier, for one observer who tried to take a kitten Bobcat at the age of six months found that this pet wildcat acquired the habit of roosting over the doorway and plunging on passing game and other creatures including the owner's friends who quickly decided to decline invitations to that home. When any attempt was made to discipline



A Bobcat "sport." This male Florida Bobcat (the common Bobcat of Louisiana) shows a most rare condition or what is technically known as melanism. It was captured alive and lived in captivity for three months. (After Ulmer.)

the wildcat, it would retire under the bed. Spitting, growling, and making horrible grimaces, it defied all efforts to dislodge it. Several sub-bed battles took place between the cat and its owner. When it was less than a year old, the wildcat had to be returned to the wilds.

Since access to trapping instructions are not easily available to the readers of the Louisiana Conservationist, there are here given two illustrations of traps sets for Bobcats together with suggestions as to sets and baits to be used. These are derived from Stanley P. Young's "Hints on Bobcat Trapping," based upon his three decades of experience in controlling predators.

The writer will be most glad to provide additional information to any one concerning such Bodcat control program since the Bobcat is most certainly a Louisiana public enemy in any game protection or game rehabilitation program.

The following are Young's (Young, Stanley P., 1941, "Hints on Bobcat Trapping") suggestions:

"Bobcats are easily caught in traps of the common double-spring steel type, in sizes 2 and 3. . . .

"In selecting a site for trap sets, one should be guided to a large extent by the tracks of the animal. . . .

"When the trail of a Bobcat has been found, by track or sign, along, or leading from its rocky lair, traps may be placed in either double or single sets. If the trail is not frequently used by livestock also, or by such big-game animals as deer, the so-called 'blind' trap set may be employed. This set is called a blind because no lure or scent need be used around it when completed. . . .

"Whether single or double blind trap sets are employed, they should be placed in holes dug directly in the trail of the Bobcat close to such an obstruction as an exposed rock, or a clump of weeds, for the Bobcat seldom fails to step over rather than on such an obstruction in its path. If the double set is to be used, the trap holes should be only about 1 inch apart, separated just far enough to prevent interference of the jaws when the trap is sprung. . . .

"A scent attractive to bobcats may be used to advantage to lure the animal to trap sets. When scenting is resorted to, however, the traps should not be placed in the runway proper, but on either side of it, or on one side only, and parallel to the trail. They should be set in the same manner as described for the blind sets, between the trail and the spot selected for scattering the scent. . . .

"The basis of the scent may be any kind of fish, but oily varieties, such as sturgeon, eels, suckers, and carp, are preferred. The flesh should be ground in a sausage mill, placed in strong tin or galvanized-iron cans, and left in a warm place to decompose thoroughly. Each can must be provided with a small vent to allow the escape of gas, otherwise there is danger of explosion. The aperture, however, should be screened with a fold of cloth to prevent flies from depositing eggs, as the mixture seems to lose much of its scent quality when maggots develop in it. This preparation may be used within three days after mixing, but it is more lasting and penetrating when it about a month old. . . .

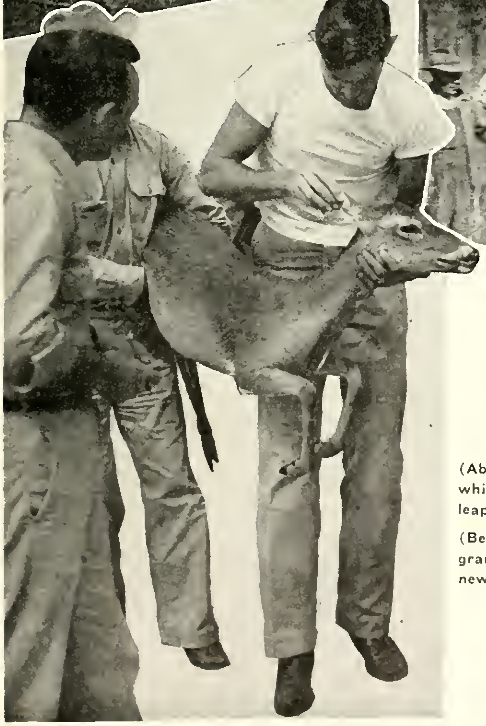
"The hunter may commence with a quantity of ground fish placed in a large galvanized-iron container, similar to a milk can, and as the original lot is used on the trap line, he may replenish it by adding more fresh fish and others of the ingredients mentioned. The addition of new material from time to time seems to improve the desirable qualities of the scent mixture.

"Oil of catnip, diluted in the proportion of 35 drops of the pure oil to 2 ounces of petrolatum, has proved an effective lure in bobcat trapping. As this is a fine oil, the petrolatum is used to give it body, and this tends also to prevent loss of the scent when exposed to rain. . . .

"While digging holes for the sets it is well for the trapper to stand or kneel on a 'setting cloth,' which is made of canvas or a piece of sheepskin or calf hide about three feet square. Human scent on the canvas may be avoided by previously bury-

*(Continued on Page 25)*

Liberating deer in the restocking program of the department of Wild Life and Fisheries. On the left game agents are transferring a deer from a large truck transport to a smaller truck, in which they were taken into the heart of the Evangeline Game preserve, recently established in the Kisatchie forest back of the former Camp Claiborne, near Alexandria.



(Above—right) Deer coming out of truck in the Evangeline Game Refuge, while Roland Bass, (extreme left) and truck attendant watch the frantic leap of the liberated doe.

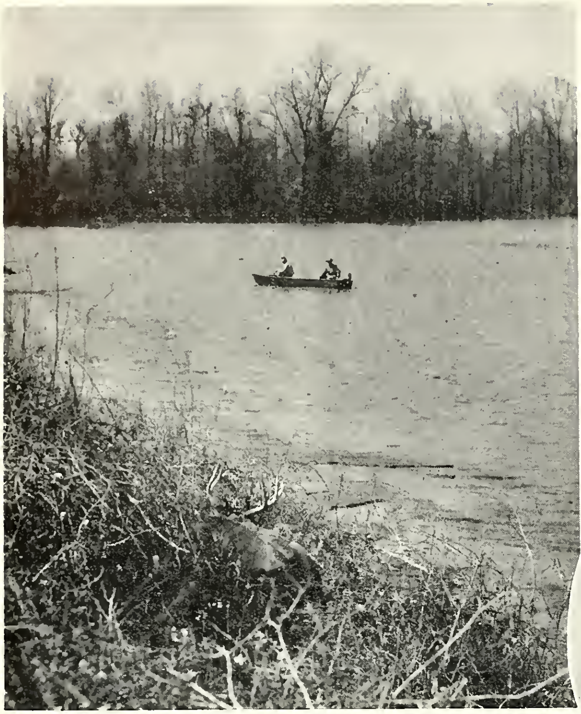
(Below—left) Ear-marking deer that is to be liberated in restocking program in the Evangeline Game Refuge. This is a splendid specimen of the new stock that has been "planted" in this national forest refuge in the department of Wild Life and Fisheries' restocking program.

# DEER RESCUE I

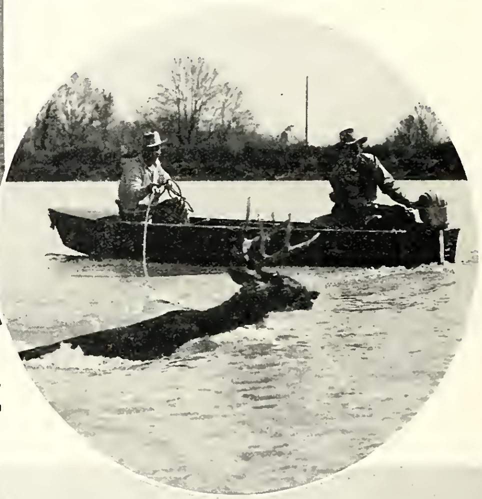
AN enormous mortality among the deer of Concordia and surroun parishes was prevented this spring by the quickly organized and ex rescue crews that went into action when flood waters drove much of deer population of that area to high ground, or stranded them on ri where they were almost immediately faced with starvation or drown

When apprised of the plight of the deer the Wild Life and Fishe department quickly assembled rescue and feeding crews, compose men from the water hyacinth control crews in that area, men from predator control crews, and state highway police, and with boats, r and rafts, began hauling out the stranded or floundered deer.

Representative Ohlsen also aided the Wild Life and Fishe department in procuring hay for feed for the endangered animals,



(Above) Huge buck deer mired down on river bank, as rescue crew sight animal's plight. (On right) Buck being towed to safety after being roped and pulled from flooded marsh. (Below) Two fields in which herds of deer fed on "vet" and were freed from threat of starvation.

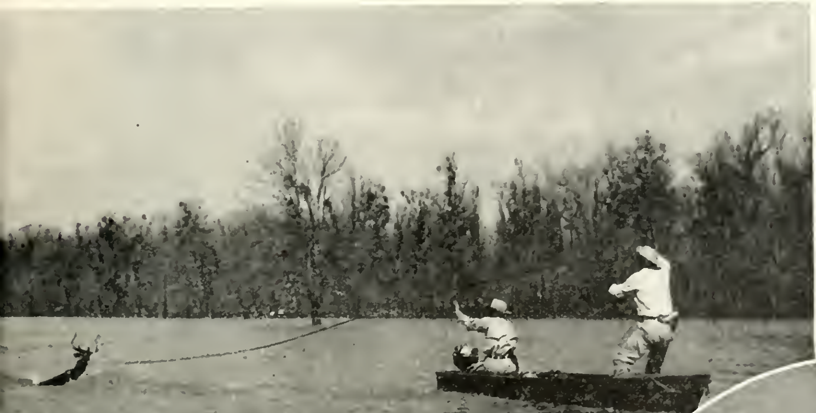


# FLOODED AREAS!

made arrangements with farmers on higher ground, for the deer to feed in their fields without molestation. It was no uncommon sight to see herds of deer from 100 to 150 in one water-surrounded field, and driving at night, in the area surrounding Ferriday, numbers of herds of deer, with 10 to 30 in a herd, were encountered on or near the highways.

Many deer were roped and towed to safety by rescue crews using "cowboys" tactics with a lasso, when the deer were found swimming in the flood swollen streams or inundated areas. Rafts, motor boats and over-sized skiffs with powerful outboard motors, property of the department of Wild Life and Fisheries, were immediately put to work effecting the rescue, and with all units coordinated doubtless hundreds of Louisiana's deer were saved from destruction.

Part of a herd of deer, driven from their normal habitat by the flood waters in the Ferriday area this past spring, feeding in a farmer's field while the owner and game wardens patrol the area to insure against molestation of the flood refugees. But for these protective measures no doubt many of these deer would have died of starvation, or have been driven back into the flooded areas to drown.



Above) Rescue workers using cowboy tactics to save a deer during
he flood in the Ferriday area last spring. Sighting this buck swim-
ning frantically in the flood-swollen stream, the man in the bow of
he skiff, expertly lassoed the deer, and then towed it to high ground
vhere feed and protection had been arranged. Dozens of such rescues
vere made in this manner.

On right) Huge buck deer being snubbed to a powered skiff, after it had been roped, and made ready to tow to safety.

# WHAT SPILLWAY REALLY DID

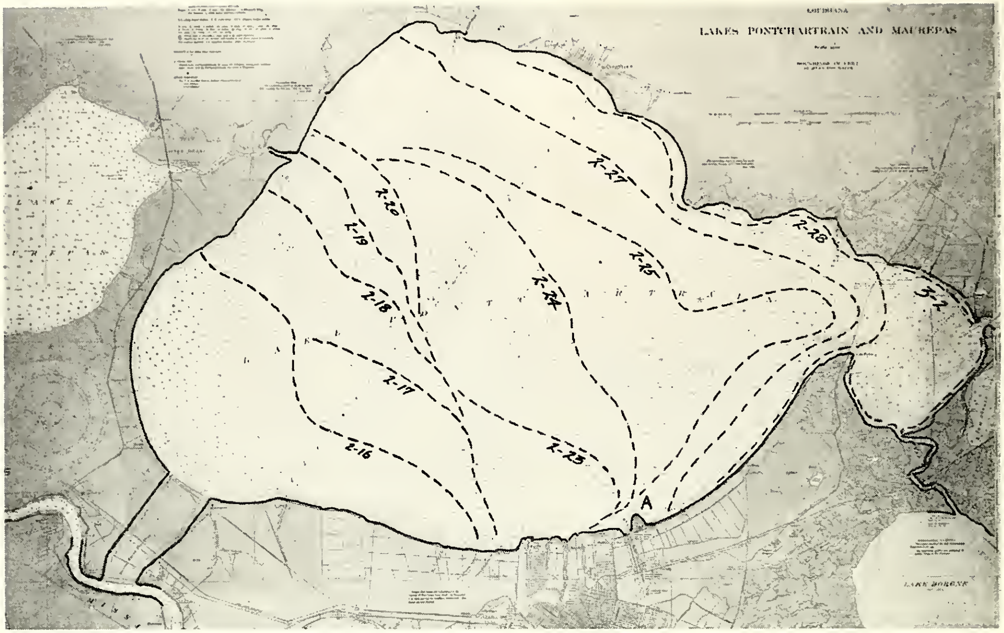


FIGURE II—Map of Lake Pontchartrain, showing rate of movement of Mississippi river water from the Bonnet Carre Spillway to Southeast Pass, Chef Menteur and the Rigolets.

**Report of the Investigation to Determine the Effect of the 1950 Opening of the Bonnet Carre Spillway on Mississippi Sound.**

### By H. Malcolm Owen and Lester L. Walters

ON February 10, 1950, on orders from the U. S. Army Engineers, the Bonnet Carre Spillway was opened to divert into Lake Ponchartrain water from the Mississippi River which had reached critical flood stage. Immediately, Ernest S. Clements, Commissioner of Wild Life and Fisheries instructed the Director of the Division of Oysters and Water Bottoms to proceed with the previously determined plants to collect carefully data that would be necessary to evaluate accurately the effect of the influx of fresh river water on the barckish estuarises of Lake Pontchartrain and Mississippi Sound.

The 1937 opening of the Bonnet Carre Spillway was extremely beneficial to the oyster resources of Mississippi Sound according to the local oystermen. The 1945 opening, according to competent investigators, had caused extensive damage to the fishery resources of Lake Ponchartrain and Mississippi Sound. There are considerable financial claims still outstanding as a result of the opening. There were no planned or systematic investigations made on the 1945 opening. Thus, the sagacity of conducting this investigation was apparent to all interested agencies.

In 1948 and 1949, Federal funds were appropriated for an investigation of the oyster producing areas of Louisiana and Mississippi which were damaged by the flood waters of 1945. That investigation (Butler 1949) established the conditions of Mississippi Sound for the two years preceding the 1950 opening. It showed the influence of the fresh water from Pearl River on the salinities of Mississippi Sound. The Department of Wild Life and Fisheries had collected data on the salinities of the Sound since 1943. This information proved to be extremely valuable for the Federal investigation of 1948, 1949 and for comparative purposes for this 1950 study.

This 1950 investigation was planned to establish the hydrographic conditions of Mississippi Sound prior, during, and after the influx of Mississippi River water. Also, it was planned to determine the effect of this water on the survival of oysters from natural reefs in the Louisiana oyster growing area of the Sound.

Grateful acknowledgement is made for the cooperation of the U. S. Army, Corp of Engineers, who supplied the data of the daily water discharge through the Spillway. The cooperation of the following individuals is also acknowledged: Mr. Nat Pedro, who collected water samples and observed the rate of water flow through Lake Ponchartrain; Miss Margot Gack and Miss Anne Liversedge, who collected and analyzed water samples from Transect III in Mississippi Sound; and Captain Charles Peterson, who periodically maintained Transect I. Mr. William Shell, Corps of Engineers, accompanied and assisted the authors with the many details of sampling. Mr. James Engle, U. S. Fish and Wildlife Service, assisted the authors from February 11 through February 23, 1950.

### II. Procedures

Twenty-one salinity and sediment stations were established in Mississippi Sound and one in Lake Ponchartrain (Figure 1). Bottom samples of water were taken at regular intervals from each station. These samples where analyzed by titration for

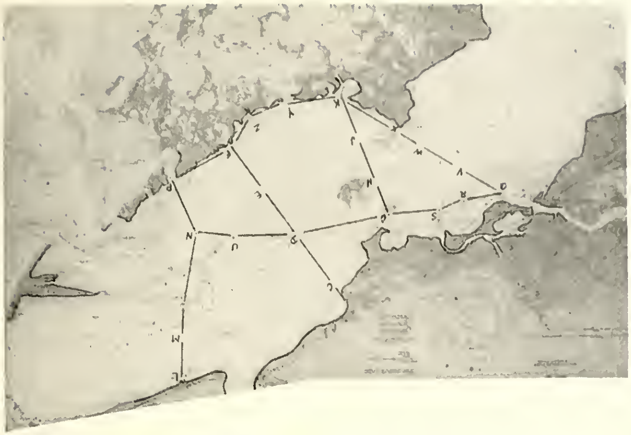


FIGURE I—Map of West Mississippi Sound, showing location of stations.

the salt content of the water. Certain samples were selected for regular photo-spectrometric sediment analysis. The temperature of the water was taken at regular intervals.

### TABLE II
### DISCHARGE OF THE BONNET CARRE SPILLWAY
### 1950

| Date | Mean Time | Discharge 1,000 C.F.S. | Mean Gage Lower Dyke |
|---|---|---|---|
| 2-11 | 1300 | 57 | 23.1 |
| 2-12 | 1300 | 78 | 22.8 |
| 2-13 | 1300 | 95 | 22.8 |
| 2-14 | 1200 | 102 | 22.7 |
| 2-15 | 1300 | 115 | 22.6 |
| 2-16 | 1300 | 114 | 22.5 |
| 2-17 | 1200 | 118 | 22.5 |
| 2-18 | 1200 | 125 | 22.4 |
| 2-19 | 1200 | 136 | 22.5 |
| 2-20 | 1200 | 141 | 22.6 |
| 2-21 | 1200 | 146 | 22.6 |
| 2-22 | 1200 | 154 | 22.6 |
| 2-23 | 1200 | 159 | 22.7 |
| 2-24 | 1200 | 166 | 22.7 |
| 2-25 | 1200 | 172 | 22.8 |
| 2-26 | 1200 | 178 | 22.8 |
| 2-27 | 1200 | 181 | 22.9 |
| 2-28 | 1200 | 185 | 23.0 |
| 3-1 | 1200 | 194 | 23.0 |
| 3-2 | 1200 | 197 | 22.9 |
| 3-3 | 1200 | 207 | 22.9 |
| 3-4 | 1200 | 223 | 22.9 |
| 3-5 | 1200 | 215 | 22.9 |
| 3-6 | 1200 | 215 | 22.8 |
| 3-7 | 1200 | 211 | 22.7 |
| 3-8 | 1200 | 207 | 22.6 |
| 3-9 | 1200 | 199 | 22.3 |
| 3-10 | 1100 | 195 | 22.2 |
| 3-11 | 1100 | 186 | 22.1 |
| 3-12 | 1100 | 180 | 22.0 |
| 3-13 | 1200 | 161 | 21.8 |
| 3-14 | 1200 | 146 | 21.7 |
| 3-15 | 1200 | 128 | 21.8 |
| 3-16 | 1200 | 106 | 22.0 |
| 3-17 | 1200 | 72 | 21.8 |
| 4-11 | 1200 | .. | 14.1 |

Data supplied by U. S. Army, Corp of Engineers.

Two oyster reefs were selected at stations H and E respectively as index stations. These oyster reefs were sampled by a standard procedure to determine the existing mortality and the mortality after exposure to fresh water.

Frequent aerial observations were made on the course of the river water through Lake Pontchartrain (Figure 2). Observations were also made on the fresh water currents in Mississippi Sound.

### III. Results

A.—Spillway Discharge—The Spillway opening of the 1937 and 1950 were strikingly similar. In 1937 the needles were pulled on February fourth; in 1950, on February tenth. The Spillway was closed on March 16, 1937 after a period of forty days; and a day later in 1950, having remained opened for a total of thirty-five days. It was open for fifty-five days during April and May, 1945. The total amount of river water that passed through in 1937, 1945, and 1950 was 6,217,000 c. f. s., 12,343,000 c. f. s., and 5,464,000 c. f. s., for a daily average of 155,675 c. f. s., 224,418 c. f. s., and 156,114 c. f. s., respectively (Table 3 and Figure 3).

Eighteen days were required for the river water to flow completely through Lake Pontchartrain. The diffusion head started through Chef Menteur and the Rigolets on March first. On March second the main head had reached Lake Borgne (Figure 2).

The passage of the Spillway water in Lake Borgne and Mississippi Sound could not be followed by observation. The red-brown coloration had conspicuously decreased as this water mixed with the fresh water from Pearl River.

### TABLE III

| Date 1950 | Time | Salinities % |
|---|---|---|
| 2-11 | 1320 | 2.0 |
| 12 | 1410 | 2.0 |
| 15 | 0905 | 1.5 |
| 16 | 1700 | 1.5 |
| 17 | 0825 | 1.5 |
| 18 | 1035 | 1.5 |
| 19 | 1650 | 1.5 |
| 20 | 1325 | 1.5 |
| 21 | 1545 | 1.5 |
| 24 | 1525 | 1.5 |
| 25 | 1045 | 0.5 |
| 27 | 1415 | 0.5 |
| 28 | 1440 | 0.2 |
| 3- 2 | 1425 | 0.2 |
| 4 | 0955 | 0.1 |
| 5 | 1530 | 0.1 |
| 6 | 1310 | 0.1 |
| 8 | 1605 | 0.1 |
| 10 | 1650 | 0.1 |
| 14 | 1645 | 0.1 |
| 16 | 1520 | 0.1 |
| 18 | 1220 | 0.1 |
| 20 | 1255 | 0.1 |
| 22 | 1325 | 0.1 |
| 24 | 1525 | 0.1 |
| 26 | 1220 | 0.1 |
| 29 | 1715 | 0.1 |
| 30 | 1600 | 0.1 |
| 4 1 | 1210 | 0.1 |
| 3 | 1300 | 0.1 |
| 6 | .... | 0.1 |
| 10 | 1300 | 0.1 |

Salinities of Lake Pontchartrain Station A after 1950 opening of the Bonnet Carre Spillway. Bottom Samplers; depth of water—3 feet.

B.—Salinities in Lake Pontchartrain—Station A was established at the New Orleans Airport on the south shore of Lake Pontchartrain. The depth of the water at

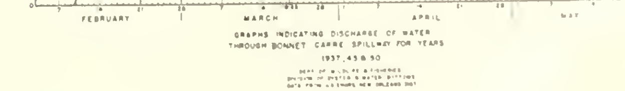


FIGURE III

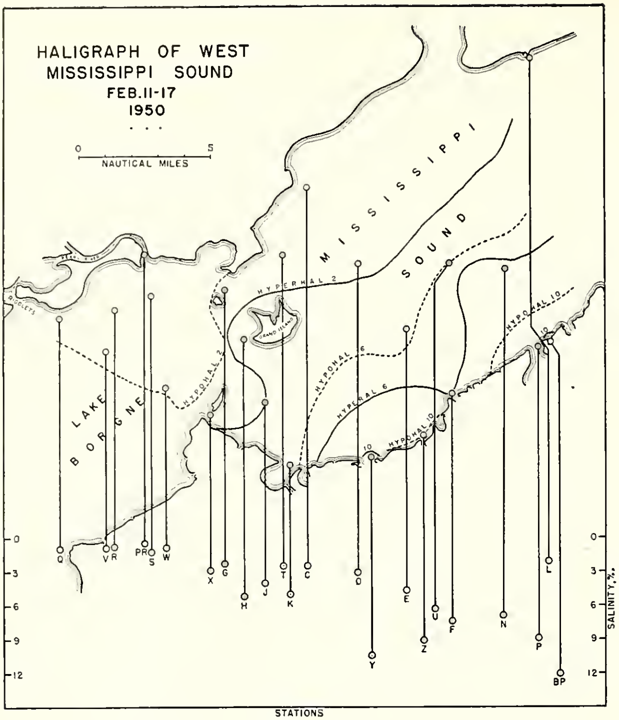


FIGURE IV

this station was three feet, and the bottom hard sand.

On February eleventh the salinity was two parts per thousand. The water remained slightly brackish until February twenty-eighth. After this and up until the present time the water in the Lake was completely fresh (Table 3).

C.—Salinities of Mississippi Sound—The series of twenty-one stations were established in two longitudinal and three transverse lines in West Mississippi Sound (Figure 1). Collections were made at the various stations at intervals in which the influence of the tidal cycle and prevailing winds would be shown in the results.

The record of the daily salinities are on file with the Division of Oysters and Water Bottoms. Figures 4, 5, and 6 represent graphically the conditions of West Mississippi Sound prior to and during the influx of Mississippi River water. Lake Pontchartrain is now serving as a reservoir for fresh water and it is estimated that it will require many months for complete recovery to the brackish environment. Thus, Figure 5 does not represent "normal" hydrographic conditions. However, it clearly indicates the return to more optimum saline environment conditions with respect to oysters.

The salinities of West Mississippi Sound are represented graphically by the method devised by Stauber 1943. The haligraph (Figure 4) for the week of February 11th, for example, shows that the water of the Sound was approximately longitudinally stratified with respect to its salt content. The area bounded by hypohal 2 was fresh. There was only a slight difference in the water shown enclosed by hyperhal 2. The saline conditions of the remaining area of the Sound were optimum for oyster survival. Pearl River was in flood stage at this time, and this influence on salinities as a potential factor of oyster mortality was found to be confined to the relatively small area adjacent to the mouth and on the north shore of Mississippi Sound. The salinity records of past years confirm these findings. The south shore of Mississippi Sound from the year 1942 (February and March) averaged above the critical minimum salinity of 5.0 ‰ during flood periods of Pearl River. In fact, this source of fresh water undoubtedly accounts for the steady maintenance of the successful oyster population of the "Louisiana Marsh" and Mississippi Sound east of Half Moon Island (Table 4).

Figure 5, haligraph of West Mississippi Sound for the week of March sixth, illustrates the combined effects of Pearl River and the fresh water from Lake Pontchartrain. The influx of river water into Pontchartrain pushed the normally low saline water of the Lake into the Sound. The mixing of this with fresh water from Pearl River plus the influx of Mississippi River water produced low salinities throughout

## TABLE V

## TABLE OF WIND DIRECTIONS IN MISSISSIPPI SOUND 2-11-50 to 4-11-50

| Date | Wind Direction |
|---|---|
| 2-11 | E |
| 12 | S |
| 15 | NW |
| 16 | NW |
| 18 | SSE |
| 20 | SSW |
| 22 | W |
| 23 | N |
| 24 | SSW |
| 25 | SSE |
| 26 | ESE |
| 28 | S |
| 3- 2 | ESE |
| 4 | NNE |
| 6 | NNW |
| 8 | N |
| 9 | NE |
| 11 | SE |
| 13 | NW |
| 15 | ESE |
| 17 | SE |
| 19 | ESE |
| 20 | SE |
| 21 | S |
| 22 | NW |
| 24 | ESE |
| 27 | SW - storm |
| 30 | NNW |
| 4- 2 | S |
| 4 | N - storm |
| 6 | NNE |
| 9 | .... |
| 11 | SE |

## TABLE VI

### Station E

| Date | Percent light transmission |
|---|---|
| 2-11-50 | 83.4 |
| 2-15-30 | 36.9 |
| 2-17-50 | 49.1 |
| 2-20-50 | 69.1 |
| 2-22-50 | 56.3 |
| 2-23-50 | 15.8 |
| 2-25-50 | 85.8 |
| 2-28-50 | 64.6 |
| 3- 2-50 | 37.3 |
| **Pearl River** | |
| 2-12-50 | 73.7 |
| **Station A Lake Pontchartrain** | |
| 2-11-50 | 92.2 |
| 2-12-50 | 98.1 |
| 2-20-50 | 88.8 |
| 2-22-50 | 60.3 |
| 2-24-50 | 84.7 |
| 2-25-50 | 55.7 |
| 2-28-50 | 46.4 |
| 3- 2-50 | 47.4 |
| 3- 4-50 | 24.7 |
| 3- 5-50 | 44.7 |
| 3- 6-50 | 55.8 |

Showing the results of measurements for turbidity at selected stations.

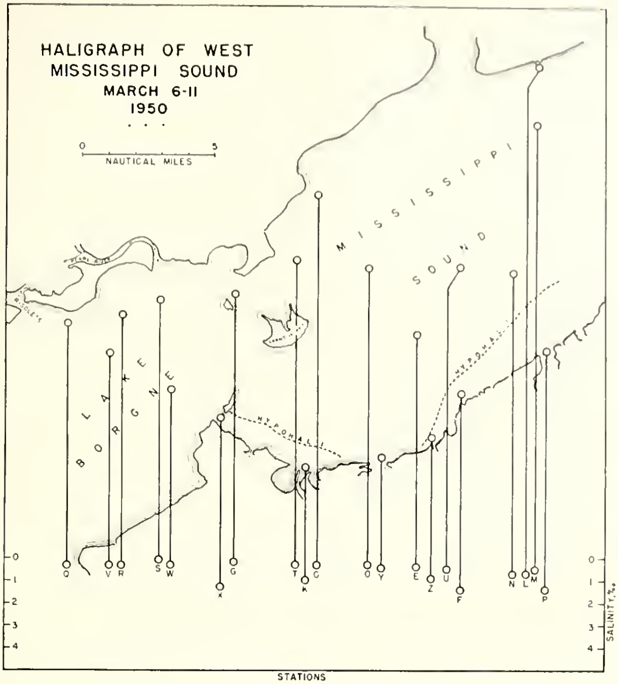


FIGURE V

L. S. U.
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the Sound for a period of twenty-nine days. The condition shown in the haligraph of March sixth to eleven depict the condition of the Sound at the peak of the low salinity period.

The return to saline normality was evident on March twenty-second, five days after the closing of the Spillway. The bulk of Mississippi River water had not reached Mississippi Sound at this time. The recovery from the fresh water environment had gradually progressed and is still gradually progressing, as is illustrated by Figure 6.

The direction and velocity of wind and the tidal current are major contributing factors for determining the salinities, especially the persistence of salinities under conditions such as were found from February 11 to April 6, 1950. A brisk northwest wind accelerated the movement of fresh water through the passes of Pontchartrain into Lake Borgne, and also accelerated the movement of fresh water through the passes and bayous on the southern shore of the Sound. Conversely, the south winds brought in the saltier waters from the outside. The tidal cycle produced a wedge-like shift of the two types of waters during a twenty-four hour period. Storm conditions of March 27 and April 3 and 4 greatly facilitated the mixing of the fresh and salt waters (Table 5).

D. Sedimentation in Lake Pontchartrain—One of the potential dangers to a brackish estuary is rapid and heavy deposition of silt to a relatively stable bottom. The biotics of Lake Pontchartrain has been changed after each opening of the Spillway (Gowanloch, unpublished data). The residents of this area after interviews concurred that the greatest damage caused by the Spillway was the "smothering of the bottom grass."

By aerial observation, the water of the Lake was green prior to the 1950 opening. As the river water replaced the salt water the color changed to reddish brown. Measurements of turbidity, made with the Fisher photospectrometer, show the percent of light transmission, the higher percentages representing the less turbid water (Table 6).

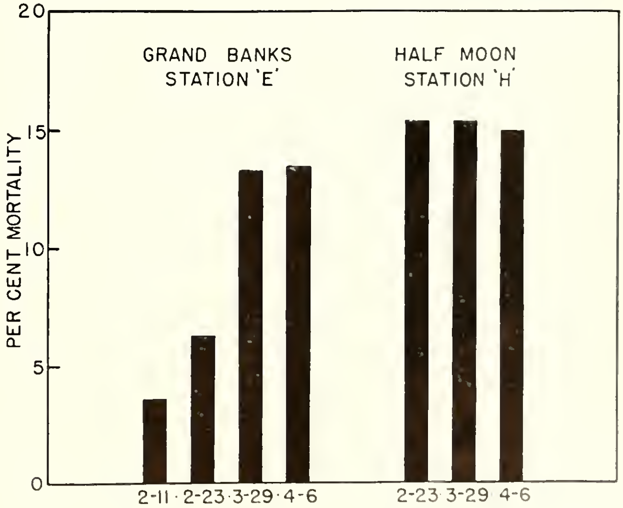
A comparison of Table 6 with Figure 2 show that the gradual passage of river water carried a diffusion head of suspended silt. A significant increase in turbidity occurred on February 28 when the main silt

*(Continued on Page 26)*

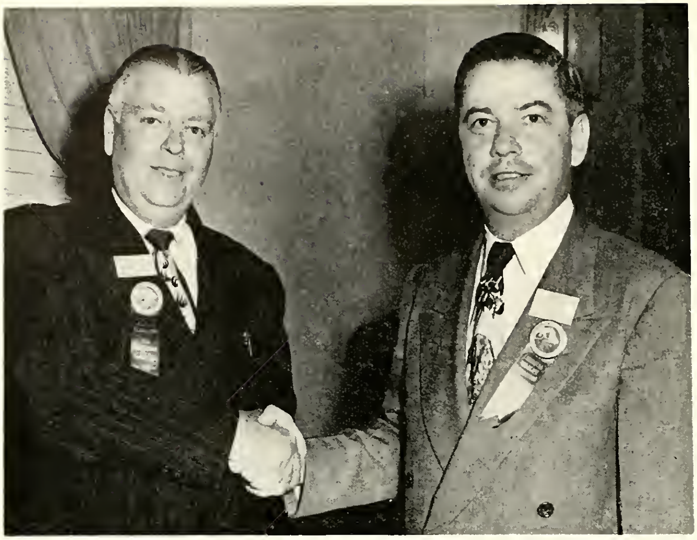
## TABLE VIII

**Percent Mortality of Oysters,
West Mississippi Sound
1950**

| Date | Station | Location | % Mortality |
|---|---|---|---|
| 2-11 | Y | E. Three Mile Bayou | 12.1 |
| 2-11 | Y | W. Three Mile Bayou | 24.6 |
| 2-11 | E | Grand Banks | 3.6 |
| 2-11 | F | Turkey Bayou | 16.0 |
| 2-15 | F | Turkey Bayou | 7.5 |
| 2-15 | P | Grand Pass | 6.1 |
| 2-23 | H | Half Moon Island | 15.4 |
| 2-23 | E | Grand Banks | 6.3 |
| 3-29 | E | Grand Banks | 13.3 |
| 3-29 | H | Half Moon Island | 15.4 |
| 4- 6 | E | Grand Banks | 13.6 |
| 4- 6 | H | Half Moon Island | 14.8 |



OYSTER MORTALITY-STATIONS E & H
MISSISSIPPI SOUND-BONNET-CARRE SPILLWAY
1950
FIGURE VII



Martin Shevnin, Alexandria, elected president of the Louisiana Wildlife Federation at its recent convention in New Orleans, being congratulated by Angus Eason, retiring president of the organization.

# WILD LIFE GROUP MEETS

DIRECTORS of the Louisiana Wildlife Federation, just before ending the 1950 convention of the organization at the St. Charles hotel in New Orleans last month, selected J. Martin Shevnin, of Alexandria as their president for the coming year. Jerry Besson of Baton Rouge, secretary of the past several years, was named vice-president; C. O. Brown of Alexandria, secretary, and A. K. Northrop of New Orleans, was re-elected treasurer.

The three-day convention, first held in New Orleans for many years, saw several outstanding movements for better conservation of wildlife resources inaugurated. One of these is a demand for legislation calling for mandatory fines, with imprisonment at the option of trial judges, for all persons convicted of violations of game and fish laws. Another item that received unanimous approval, called for the elimination of a state fishing license for sport fishing in salt waters.

**Recommendations were made as to hunting seasons and bag limits on nearly every species of game bird and mammal in the state. Special interest was shown in the matters of stream pollution, outdoors fire protection, predator control and allied matters, all tending to better wildlife conditions.**

The migratory waterfowl committee overruled a movement to request a split season for the state and recommended a season beginning as late or later than last season. A quail hunting season on the same dates as last year, December 1 to February 20, was agreed upon but the daily bag limit was reduced from 15 to 12 in the recommendations of the federation.

The mandatory imposition of fines in cases of convictions of violations of the game and fish laws, with jail sentences being left to the option of the trial judges came after very definite recommendations made by Wild Life Commissioner Ernest S. Clements in his address before the delegates at the annual banquet of the federation. Minimum fines or suspended sentences even in cases of serious violations have seriously impeded the work of the enforcement department of the wildlife department, according to Commissioner Clements and only the certainty of severe punishment will deter habitual violators, according to Commissioner Clements' statement.

High praise was given Commissioner Clements and his department for the outstanding game rehabilitation program inaugurated and carried out during the past year or so and for the elimination of predators in connection with it. Mr. Clements in his address promised the liberation of another 30,000 quail, some 2,000 more wild turkeys and other game birds and animals during the coming year.

Before final adjournment, the convention elected the following as district vice-presidents of the federation: Districts 1 and 2, B. O. Graves of Norco, La.; District 3, E. L. Simoneaux, Thibodaux; District 4, Harry Hickman, Shreveport; District 5, A. N. West, Hodge, La.; District 6, Jerry Besson, Baton Rouge, La., and District 8, Ralph Moseley, Winnfield, La.

Member in the Louisiana Wildlife Federation number 11,500 at the opening of the 1950 convention, a gain of many thousands during the past year. It has some 49 chapter organizations located in 48 of the state's parishes.

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The jerboa, a small rodent built somewhat like a rat, can jump fifteen feet. To make an equivalent jump, considering body size, a man would have to jump two hundred feet.

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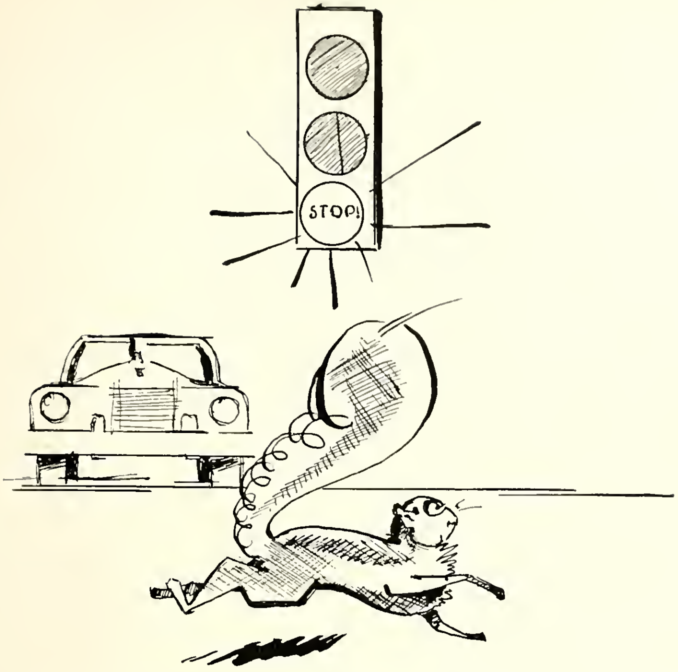
The dragon fly's compond eye, which is composed of nearly 30,000 units, permits vision in almost all directions.

Gaston C. Ducote, director of the Louisiana Tourist Bureau, with a fine catch of fish made during the high water in Avoyelles parish this spring.



# CUTE LITTLE FELLA

**By Jimmie Murphrey**

HE was a cute little fellow . . . with a legion of friends that singled him out on many occasions. One morning in the early hours, he was up and about before the dawn, stirring about in search for food for the early meal. All day long he frisked about, full of energy and enjoying life, but about four o'clock that afternoon, all was over.

State and National laws protected his life against the marauders that each year wage war against him, but no law protected him against this terrible, untimely demise. He had brought laughter and glee to many of the tots, and the grownups of Alexandria and vicinity as well. His capers had been entertaining to many on bright, sunny Sunday afternoons. With his beautiful fur coat, he was a sight to see, and caused much wishful thinking among many of the men watching.

Throughout the world crime runs rampant, but this little fellow knew nothing of it, for he was living in a supposedly "protected world" . . . protected against all forms of danger against his life . . . all but the one that caused his sudden and terrible ending . . . the monstrous and deadly machine age.

Maybe his murderer was unconscious of the fact that he had snuffed out a life . . . maybe it was done deliberately . . . no one but the driver of that murder car will ever know. The victim was a full-grown grey fox squirrel that made his home in the trees of the City Park, playground of many of Alexandria's children.

When found, he was still on his feet, seemingly as though he was trying to drag himself off the edge of the concrete highway, and back up into the tall trees where he had spent so much of his life, running and jumping from limb to limb. Few will miss him, excepting the children, who at times brought nuts to the park to leave at the tree trunk for the squirrel to come down the trunk of the trees to get them, and then to go scooting back up the tree to perch on a limb and crack and eat them.

Though the game laws of the state protects against hunters, no protection is given against the motorists. A plea is made here to these people who drive, to have a care and not be the one that will cause the expiration of a life of one of these wonderful little creatures of nature.

# HOW FAST DOES A BULLET FALL!

"IF YOU shot a bullet straight up in the air, how fast will it fall to earth? If a shooter fired a shotgun straight up, would he or anyone else be in danger from the falling shot?"

From the many letters received it is evident that the subject of these questions is of great interest to many sportsmen, novice and experienced alike. Dr. C. S. Cummings, supervisor of physics and ballistics research for the Remington Arms Co., Inc., Bridgeport, Conn., answers these questions in the following interesting manner:

"Until science learns how to produce a rocket or other projectile with sufficient energy to overcome the earth's gravitational pull and escape into outer space, the statement that 'What goes up must come down' will remain a fact. Elementary physics teaches that if there were no atmosphere, a ball thrown vertically upward would return to earth with exactly the same speed with which it was initially thrown. Nature, however, is not so simple and the atmosphere so necessary to the existence of life on the earth greatly complicates the problem of the velocity of freely falling objects.

"Although in principle the answer to these questions is relatively simple, it is not so easy to give a numerical answer. It is well known that the resistance offered by the air to the passage of a bullet or other object increases in a complicated fashion as the velocity of the bullet increases. For relatively low velocities, for example, the resistance increases approximately four-fold when the velocity is doubled. An object falling freely through the air, then, is acted upon by two opposing forces; first, the force of gravity which tends to increase the velocity of the falling object, and secondly, the resistance of the air which tends to retard the velocity of the falling object.

"As the velocity of fall increases from zero at the start, the air resistance will correspondingly increase until a point is reached at which the downward pull of gravity is equalled by the upward resistance offered by the air. When this point is reached, the velocity of the object will no longer increase and it will continue its fall at a constant rate. This constant rate is known as the 'terminal velocity.' For falls from very great heights the motion is further complicated by the varying density of the air.

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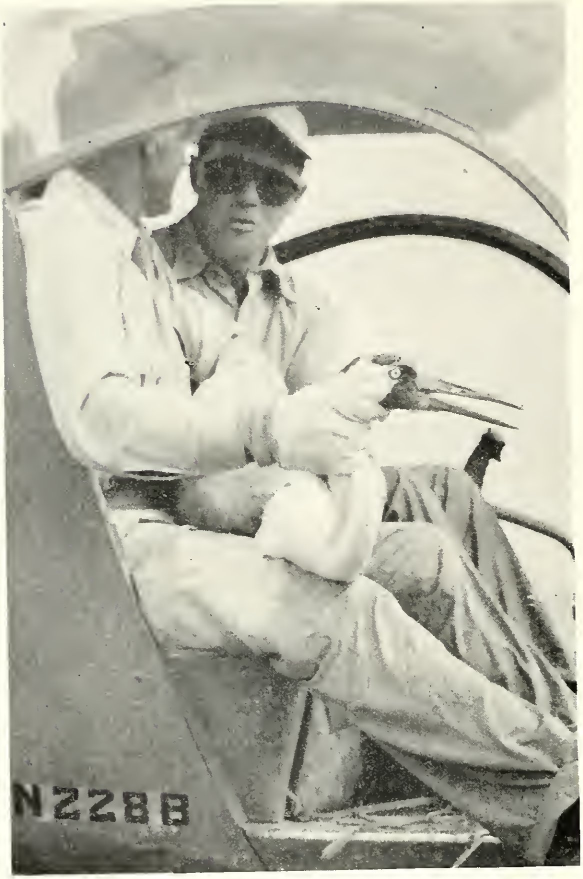
Some worms have only a branching sack for a stomach.

# LOUISIANA'S LONE "WHOOPER" CAPTURED



Taking Louisiana's last whooping crane to Port Aransas, Texas, after its capture in Louisiana swamp.

### By Arthur Van Pelt

A FIRST-HAND description of a dramatic outdoors event that occurred just a few days ago, came to me recently. It impressed me so strongly that I'm going to pass it on to you. It concern the passing from our state of the largest and one of the most beautiful and spectular of all the birds of America,—a bird that in the years gone by, lived here in great numbers, but whose ranks were decimated by the lust to kill of our own people.

The bird is the great Whooping Crane.

Much has been said in the public press during the late years about the passing of the species. Gradually its numbers have been lowered until now only 35 are known to exist alive in all the world.

Most of these appear now to be congregated in the Aransas Wildlife Reserve, an ideal habitat for them, east of Corpus Christi in the coastal marshes of Texas. Until a few days ago, though, Louisiana could lay claim to one lone Whooper,—a beautiful big bird which seemed to prefer to remain in solitary dignity, in the open marshes of Vermilion and Cameron Parishes rather than to join the others of his kind in Texas.

For years, this one bird has remained in the Louisiana marshlands. Almost daily, trained observers of the U. S. Fish and Wildlife Service, the National Audubon Society, or the Louisiana Department of Wildlife and Fisheries made flights over his favorite feeding grounds to check on his presence and welfare. That bird got more jealous attention than does the aveage child.

But the thoughts of the wildlife experts later were turned to new channels. Their efforts of late have been directed toward increasing the number of the living birds; not only to watching them.

And so, after deliberations between Government, Audubon Society and State officials, it was determined to attempt to capture the lonely Louisiana bird and remove it to the company of those already in the Aransas Pass Reserve, in the hope of inducing a mating between it and one of the others and, possibly of adding to the world's population of the species.

The effort was made in mid March. First the current location of the great white bird had to be determined. Johnny Lynch, of Abbeville, La., representing the U. S. Fish and Wildlife Service, who had been carefully watching the lonely crane for several years, took to the air and after a long flight, found it, far down in the prairie, just north of White Lake and south of Gueydan, La.

A day or two later, following a plan of strategy agreed upon, two helicopters, owned and operated by the Petroleum Bell Helicopter Service, took off from Lafayette and flew over the marshes where the bird had been seen the day before. Again it was located and a chase began.

Johnny, in narrating the subsequent activities to me, told of the wonderful aerial acrobatics of the great bird which, as he said, defeated the flying skill of the veteran pilots that day, and at last it escaped them by simply dropping into the marsh and disappearing into the tall grass.

Two days later, however, a second attempt was made and it was a different story, as Johnny told it.

"We decided to use relay tactics that day," he said. "We flew quite widely apart and arranged signals so that both crews might know if the bird were located. Our ship saw it first. We were three in that (flying windmill), E. J. Smith, the pilot, Frank Lee and I. We signalled the other machine and they came over. In it was the pilot, L. L. McCombie, and Bob Allen and Nick Schexnayder, both of the Audubon Society. Nick, resident manager of the society's reserve west of Marsh Island, had been nursing that bird along for a number of years and we decided that he should have the honor of finally capturing it.

"We literally tired the bird out, by chasing it and finally it alighted in the marsh. Quickly the helicopter dropped down above it and I believe that Nick Schexnayder was out of the helicopter and dropping before it was within 20 feet of

*(Continued on Page 25)*

# UNSUNG HELPMATES

ADD to the list of unsung helpmates (and they are legion) the conservation officer's wife!

Hers is a double job.

One job is that of any wife—keeping house, taking care of the children, encouraging her husband; the other—secretary, receptionist, dispenser of information, issuer of permits, "filling in" for her husband during all hours of the day or night while he is on duty.

Officers' wives have been asked to describe their experiences.

One wife puts it this way:

"The officer's wife leads a terrible life, let all who read this beware; she has no home, she lives alone—her husband is never there. His job is his bride and he stays by her side, she has his completest devotion; there's no time left and the wife is bereft, for marriage there's scarcely the notion. If he comes home at all, he's not on the ball—he's much too tired to be human; so he goes to bed with nothing much said—and another day's gone for the woman. I probably should mention the usual contention, that housework takes all a wife's time; that must be a fable, 'cause the boss thinks we're able, to do two jobs without getting a dime."

Another writes:

"As for pet peeves, I suppose we all have them. We do like to see a little of our husbands, you know, and it is nice to plan a movie or party occasionally without it being cancelled at the last minute because of the 'call of duty.' Church has always played a big part in my life and I do recent missing going to church, week after week, all for the sake of my husband's job." She adds, however, that:

"On the whole I think most of us feel that being a conservation officer's wife is most satisfying."

A third wife protests:

"Having my husband called a 'fish cop' and the like. I am no social climber but my husband has worked hard for a long time to earn the name and title of conservation officer and I am proud of it. 'Game warden' can be tolerated, but no 'fish cop,' please!

"Post-midnight telephone call from a local tavern asking the opening date of the fishing season (some two or three months away) . . . .

"Calls for 'permit to burn' when the person calling has no idea as to the section (sometimes the township) where he wants to burn and comes up with something like, 'It's just down the road from the old Campbell place.' Makes you wonder sometimes how they find their way home. . .

"Summer tourists who think the officer's home is a public rest stop and who are insulted when you try to explain the difference. . .

"Plan dinner for two and then have 'headquarters' send in four officers without any warning. Especially bad on Saturday night, with weekend shopping completed and the stores closed. . .

"Talkative neighbors who accuse you of raising your family on confiscated fish and game when, actually, you can't stand the smell of venison and a rainbow trout gives you indigestion just thinking about it. . .

"Thirty-eight calls for fire permits on Monday morning when I am trying to do the family wash . . ."

Other wives write:

"The telephone resolves itself into the big problem for the officer's wife. Calls for information are many, the information desired complex. Because the officer is not home the caller waxes indignant and takes it out on the wife. Getting calls at all hours of the night, more often than not from someone who has spent the last few hours, neither wisely nor well, in a tavern and who has become involved in an argument about a season that won't take place for another eight or ten months—he wants the officer to settle it. Calls as to where you can buy a license, catch a mess of fish, shoot a pheasant, whether you can hunt foxes at night, and others too numerous to mention. The officer, having put in a long, hard day, and being presently wrapped into the arms of Morpheus, the wife gets up to answer the phone. . .

"Officer leaves home in the morning, saying he will be back at 6 o'clock for dinner. Dinner is ready at that hour—no officer—the rest of the family sit down to their repast. Finished, and the dishes done, hubby walks in, hungry as a bear. Wife starts all over again . . ."

"Weekends and holidays being the most essential times for an officer to be on the job, it is practically impossible to entertain or to visit friends and relatives at times when they are not working. . ."

"Again—phone calls—so many the phone company was forced to put on a special operator. In order to get some sleep just before or during seasons, we have to notify the operators when we go to bed—'ring us for emergencies only.' We're on a rural line with 13 others. We are neighbors and they used to call us friends—now they hardly speak. . ."

"Evidence in the family refrigerator—

short fish that were carried all day in the hat trunk of a car and then brought home and stuck in the refrigerator to taint the good food. Smelly coyote hides lying all over the house—brought in by bounty claimants. . ."

"Sitting alone for 14 days during deer season while hubby is on special patrol. . ."

"The man who walks into the house without knocking, apparently under the impression that it is an office, catching me in various stages of dishabille—much to the embarrassment of both of us. I now keep the doors locked. . ."

"Baby in the bathtub, the phone or doorbell rings. By the time the caller is taken care of, Junior is parading around the house in his birthday clothes, dripping wet. . ."

"The chap arrested a week or so ago, and who has taken on a little false courage down at the corner tavern, stops by to argue his case with my husband who's not at home. I take the brunt of the abuse. Later, hubby contacts him to see what it's all about and finds him a pretty good Joe with no kicks. . . ."

"Humming at my work, looking forward to stepping out this evening. About 6 p. m. hubby breezes in, announcing he's got to work tonight. No, there's no getting out of it—old Joe Blow, a violator of long standing, has some traps out illegally and hubby is sure he can catch him. Tomorrow night will not do. In a couple of days this disappointment wears off and things are back to normal. Hubby has consented to take Saturday and Sunday off to visit the folks. Day after day goes by, bringing the outing nearer and nearer, with no apparent hitch in sight. Nothing will happen this time, for sure—or so hubby says. Friday night finds him on the doorsteps, very, very reluctant to come inside. The 'boss' has dreamed up a special patrol and hubby is indispensable—he just can't be spared. Then comes the rare occasion when we do get away to visit friends. All evening long hubby and the host talk conservation—yackety yak! Great day in the mornin' . . ."

"I am always chained to the typewriter doing my husband's paper work. He gets the pay, I do the work. I lie awake nights always thinking the worst—maybe he's been shot, hurt, beaten up, in a wreck, drowned, maybe even killed—a million things. . .

"But, even though he's called a 'rabbit shepherd,' 'deer herder,' 'fish cop,' 'the law,' 'the game pinch,' and a host of other misnomers, I would not trade my life with him, nor would I ever want him to have another job, for I know that he just would not be happy in any other line of work."

Who do you think deserves a big share of the credit?

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Most of the early spring-song of birds is by way of announcing their claim on certain nesting areas.

All-aluminum boat and Super 10 Wizard outboard motor, donated by the Western Auto Supply company, as a prize for the champion racer in the Fifth annual Pan-American regatta, to be held on Lake Pontchartrain, May 20 and 21. Looking over the boat, left to right, are: Rudy Smith, co-chairman representing the New Orleans Power Boat association; Commissioner Ernest S. Clements, of the state department of Wild Life and Fisheries; R. F. Duthu, Jr., Forty and Eight Voiture 108; and William Johnson, in charge of the outboard motor shop of the Western Auto Supply company.

## ANNUAL REGATTA SET FOR MAY 20-21

STATE and national government dignitaries will be among the guests and speakers attending the fifth annual Pan-America Regatta, to be staged on Lake Pontchartrain, Saturday and Sunday, May 20 and 21. Vice-president Albin B. Barkley has accepted an invitation to be present, and have U. S. Senator Russell B. Long, Lieutenant Governor William Dodd, U. S. Congressman F. Edward Hebert, and Commissioner Ernest S. Clements of the state department of Wild Life and Fisheries.

The regatta, sponsored by the New Orleans Power Boat association, will feature 10 classifications of power boat racing, with some of the outstanding race pilots of America competing. The races will start at 2:30 p. m. each day, with the first heat in each classification being run on Saturday, and the second and final heat on Sunday afternoon.

One of the top prizes to be awarded is an all-aluminum boat, and a Super 10 Wizard outboard motor, which has been donated by the Western Auto Supply company.

It is expected that a record crowd will be present along the Pontchartrain seawall to witness the races. There is no admission charge for spectators and because of the many thrills that have attended these races in former years, it is expected that more than 40,000 persons will be on hand each day.

Rudy Smith, general chairman representing the New Orleans Power Boat association, has this year secured the joint-sponsorship of the local Voiture 108 of the Forty and Eight organization, and this group of veterans under the leadership of E. F. Duthu, Jr., is assisting in the arrangement of the program.

Picture of a recent rabbit hunt made in Vermilion Parish. This was the last of five similar hunts with each man getting his limit. From left to right in the picture are, Wm. A. Wright, David Babineaux, Leland Hebert, Earon Arceneaux, all of Rayne, La.

## PHEASANT AS A GAME BIRD . . .

*(Continued from Page 6)*

need for which is clearly indicated by the extremely numerous inquiries regarding this magnificent bird which has become astonishingly successful in certain of the Northern States.

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## BOBCAT AS PREDATOR . . .

*(Continued from Page 12)*

ing the cloth in an old manure pile. The dirt removed from the place where the trap is bedded may be piled on the setting cloth. Surplus dirt not needed for covering the trap should be scattered evenly on the ground at some distance from the set. It is well also to wear gloves while setting traps, and to use them for no other purpose, though the precautions against arousing the suspicion of bobcats are less necessary than those in trapping wolves and coyotes. . . .

"When received from dealers or manufacturers, traps frequently smell of grease, perspiration from human hands, or other odors caused by contact with various kinds of merchandise in the course of shipment. . . . Simply burying the traps for a few days in a manure pile (the odor from which does not arouse the predator's suspicion) will often remove all other odors. It is better, however, before using traps to clean them by boiling. Never attempt to burn off an odor over a fire, as this may destroy the temper of the springs and make the trap worthless."

All animals show peculiar "sports" or "freaks" (which arouse a great deal of popular curiosity) in which instead of the normal coloration, the animal can be completely white (an albino with pink eyes) or completely black (a melanistic individual in which all pattern is lost and the fur or feathers are completely black). Ulmer described one extraordinary specimen (of the precise "race" common in Louisiana) shown in the accompanying illustration. All usual color pattern has been masked in the deeply black fur. It should be noted that this situation is comparable with the Black Leopard ("Black Panther") which is simply a melanistic leopard, and also by records of Black Tigers in India. Comparable also should be mentioned the "Black Wolf" of Louisiana (particularly Tensas Parish) which is actually a melanistic race of the "Red Wolf" of the Mississippi Valley.

STARTS HIM OFF YOUNG—Adras P. LaBorde, Jr., of Alexandria is shown with a 4-pound 7-ounce bass he caught in a barpit near Alexandria. Only six-years-old, the boy has been fishing regularly for two years. His father is fishing and hunting editor of the Alexandria Daily Town Talk.

Commissioner Clements, as a result of his life-long familiarity with hunting conditions, has included that the Bobcat is one of Louisiana wildlife's top enemies. His opinion was sustained by Stanley P. Young who, as a scientist, has been professionally studying the Bobcat as a predator for thirty-one years.

Young believes that one Bobcat is actually the equivalent of one wolf in the measure of its destruction. It is, therefore, interesting to note that under the predator control program which has been so substantially carried on by the Department of Wild Life and Fisheries under direction of the Commissioner, seventy-eight Bobcats were destroyed in 1949 alone.

It is more than ever abundantly clear that predator control under the conditions that exist in the Southern States is a primary necessity for a good game preservation and rehabilitation program.

## LA'S LONE "WHOOPER" CAPTURED

*(Continued from Page 22)*

the marsh. But he was within reach of the bird when he landed and caught it by the upper neck to prevent it striking him with its dagger-like bill. We handled it carefully and got it into the plane and came back to Lafayette. Then we drove non-stop to Aransas Pass, Texas, that same evening and night to place that valuable specimen among its relatives in the best possible condition. Nick literally cuddled that big bird in his arms all the way, on that trip, but it was well worth all the effort that we all took to accomplish the result that we did.

"When we got there, and after a little exercise the crane was in fine shape again and hungry. We fed him some frogs and he made friends with all of us, as tame as could be. It was amazing."

In 1935 there were five of these immense birds known to be living in that great prairie country. I personally saw them in the Gueydan prairie, just once many years ago. They looked like five men dressed in white out in the marsh. By 1940, their numbers had increased to 13 birds. But that same year there came a great storm and tidal wave that drove the birds in to the rice fields and most of them were shot by hunters or killed by the storm. Only three remained and of these two have, since then, been lost. Only this one old bird remained.

The Whooping Crane is five feet or more in height and weighs from 30 to as high as 40 pounds. So you can see what a job it is to handle one alone. The Whooper is pure dazzling white with black wing tips and a crown of brilliantly red atop its head. It's truly a noble looking bird. Audubon Park had one up to a year ago when it was loaned to the Audubon Society and is now on the Aransas Reserve. They hope that the tribe may increase this year. At all events everything possible is being done to preserve the species, as you can see. It's kind of sad to see the passing of a magnificent species from our state, to se the drop to absolute zero from the great abundance of the Whooping Cranes that used to come to Louisiana each year.

## WHAT SPILLWAY REALLY DID . . .

*(Continued from Page 19)*

head reached Station A. The turbidity results of the fifth and sixth of March and subsequent observations of the collected samples indicate that the majority of the silt load was deposited in Lake Pontchartrain. However, as has been mentioned, the wind velocity is of primary importance in shallow and soft-mud bottom lakes.

E. Sedimentation in Mississippi Sound—During the period of this investigation, the waters of Mississippi Sound were turbid. The degree of turbidity was dependent upon the wind.

To date, there is no correlation with the turbidity of the waters of Mississippi Sound and Pearl or Mississippi Rivers waters. One half mile up the mouth of Pearl River the water was clearer than it was at eight of thirteen stations in Mississippi Sound on February twelfth (Table 7). There was no evidence of excessive silting in any of the oyster reefs of Mississippi Sound.

TABLE VII

TURBIDITY OF WATER IN MISSISSIPPI SOUND

FEBRUARY 11 TO MARCH 6, 1950

| Date | Station No. | % Light Transmission |
|---|---|---|
| 2-11-50 | T | 74.0 |
| | G | 53.4 |
| | S | 65.0 |
| | R | 41.9 |
| | Q | 66.1 |
| | V | 63.7 |
| | W | 72.7 |
| | X | 79.7 |
| | K | 53.4 |
| | Y | 69.9 |
| | Z | 90.5 |
| | F | 93.7 |
| | E | 83.4 |
| | D | 45.8 |
| | C | 46.4 |
| | D | 58.5 |
| | U | 63.1 |
| 2-12-50 | N | 84.4 |
| | BP | 83.4 |
| | P | 47.6 |
| | F | 97.5 |
| | Y | 97.3 |
| | Y | 89.8 |
| | K | 57.2 |
| | J | 62.5 |
| | H | 60.8 |
| | S | 49.3 |
| | PR | 73.7 |
| | G | 54.5 |
| | T | 28.5 |
| | C | 29.6 |
| 2-15-50 | C | 64.7 |
| | C | 83.7 |
| | D | 31.4 |
| | D | 52.6 |
| | E | 36.9 |
| | F | 69.8 |
| | P | 18.8 |
| | N | 49.7 |
| | U | 74.3 |
| | T | 56.3 |
| | G | 44.0 |
| | S | 68.1 |
| 2-16-50 | L | 84.9 |
| 3-17-50 | E | 49.1 |
| 2-18-50 | L | 88.8 |
| 2-20-50 | E | 69.1 |
| 2-22-50 | E | 56.3 |
| 2-23-50 | G | 75.3 |
| 2-23-50 | H | 78.7 |
| | E | 15.8 |
| 2-25-50 | M | 72.0 |
| | E | 85.8 |
| 2-28-50 | M | 67.3 |
| | E | 64.6 |
| 3- 2-50 | E | 37.3 |
| 3- 6-50 | M | 65.0 |

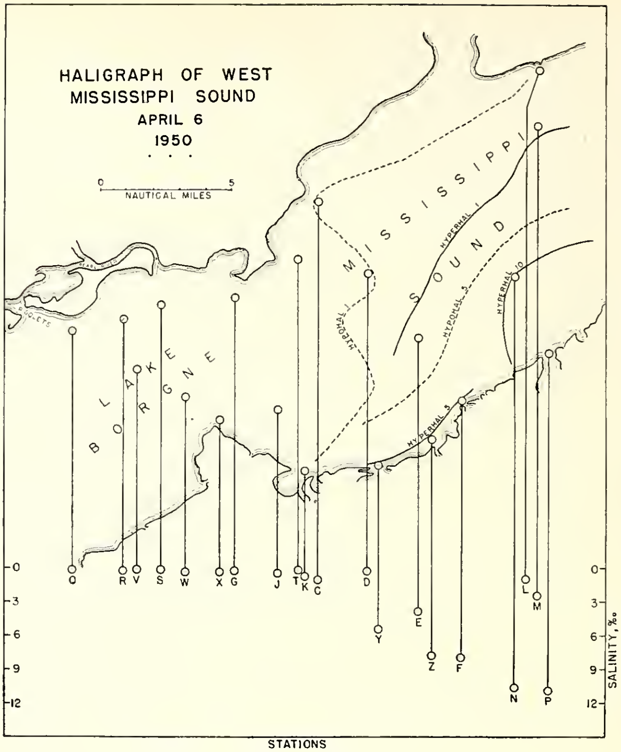

FIGURE VI

E. Oyster Mortality—Samples of oysters were taken from several stations in West Mississippi Sound at periodic intervals during the investigation (Table 8). These oysters were from reefs that were damaged by the flood waters of 1945. After the preliminary sampling of February 11 to 23, two stations (H and E) were selected as index stations for mortality studies.

Progressive but a low mortality of oysters occurred at Station E. Oysters at Station H have not had appreciable mortality based on the standard procedure for measurement that was used. However, the number of bright shells scars which were found on oysters at Station H attest to higher mortality figures. The mortality was estimated to be approximately thirty percent.

A check sample was made on April sixth. A slight increase in mortality had occurred at Station E. There was not a significant change at Station H.

### IV. Conclusions

It has been established that salinity of brackish water below 5 parts per thousand is critical for oyster life. The factors of temperature, physiological condition of the oysters, and possibly other chemical constituents of the waters serve to modify this generally accepted principle. The temperature of the water in Mississippi Sound was comparatively lower in 1950 during February, March, and April than it has been during the past three years. The maximum and minimum water temperature of this investigation was 20.5°C and 15.1°C respectively. Positively correlated to low temperatures is the quality or condition of the oysters. The condition of oysters was observed to be good and remained so after subjection to fresh water.

The 1945 opening of the Spillway came at a time of higher temperatures and it is logically assumed at a time of poor condition of the oysters.

The return to saltier conditions (Station E) has been gradual and from a knowledge of the existing conditions, it is expected to continue to be gradual. Thus the oysters were not and are not expected to be subjected to sudden or extreme reverse changes in salinity which is equally detrimental.

The influx of fresh water reduced the

snail or oyster conch population in Bayou Pierre and reefs west of this station.

It is essential for the maintenance of a successful oyster population that there be a source of nutrient-bearing fresh water. During the past few years Pearl River has had above normal drainage into the Sound. This undoubtedly has created an adverse envioronment for oysters on the northern shore of the Sound and frequently for those reefs immediately opposite the mouth on the southern shore (Butler 1949). In the opinion of the authors, however, this is far outweighed by the benefits to those reefs in the southern region of the "Louisiana Marsh" and to those of eastern Mississippi Sound.

The constant shifting of wind direction accelerated the mixing of fresh and salt waters with the resultant betterment of the environmental conditions.

There has not been any observable or measurable detrimental siltation of the oyster reefs of Mississippi Sound from Pearl River or from water from Lake Pontchartrain. There was a measurable difference in turbidity of the water in Lake Pontchartrain before and after the Spillway opening. The detrimental effect of this silting on the biotics of Pontchartrain can only be speculated. In the opinion of the authors it will cause considerable change and resulting damage.

From this investigation and from past salinity records of Mississippi Sound, the extent of critical fresh water from Pearl River alone is confined to that area west of Stations C, D, E, and F. The constant flow of fresh water from Lake Pontchartrain is sufficient to more than double this area in an east and south direction. In 1937 and 1950 the flow of water from Lake Pontchartrain was of short duration when compared to that of 1945. In 1950, because of the time of the year and relatively short exposure, the major reefs of Louisiana were not materially damaged but are expected to be benefitted as a result opening of Bonnet Carre Spillway.

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The horns of the African rhino are not attached to its skull. They grow out of the skin and have a high commercial value among the Chinese, who use them for medicinal purposes.

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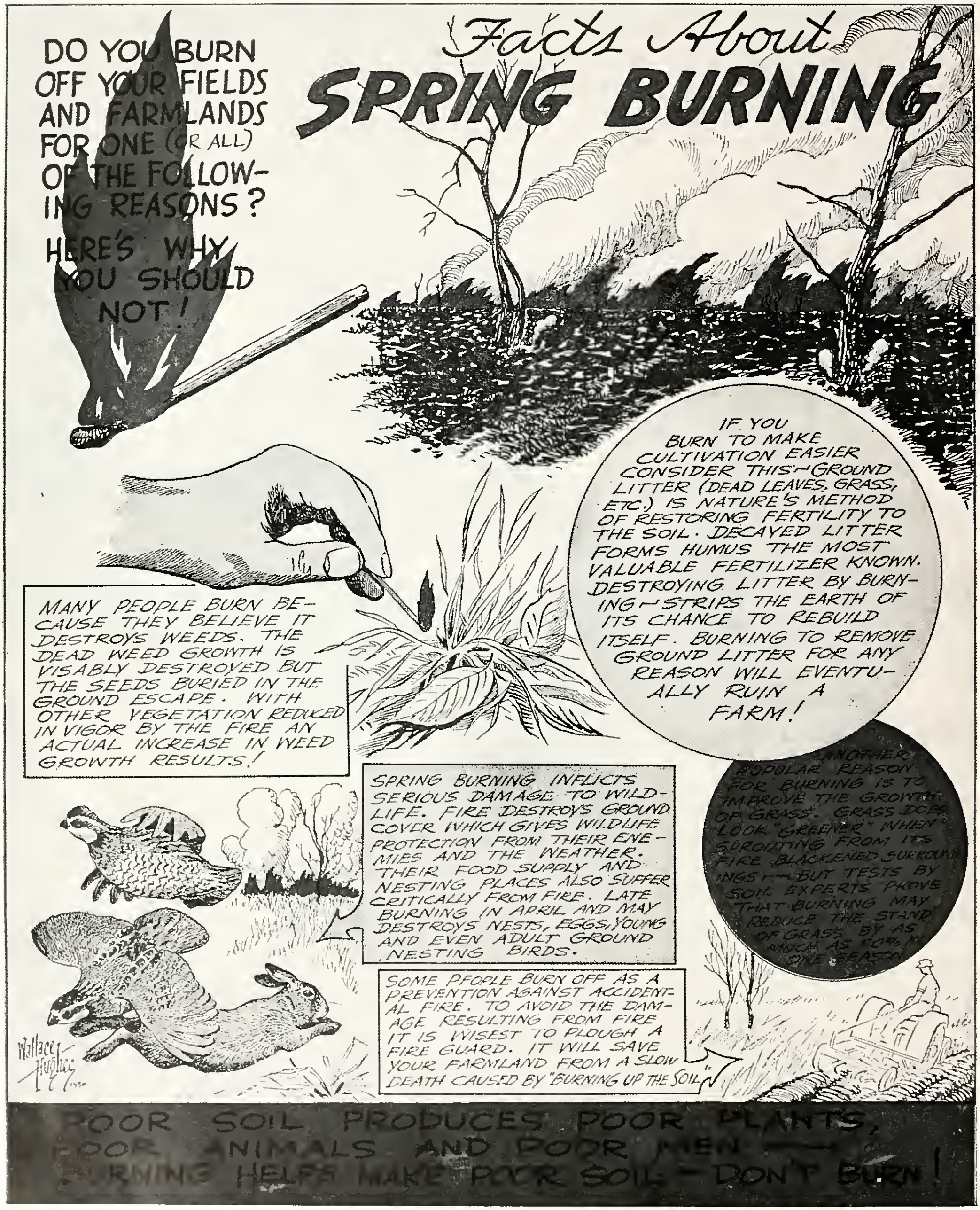
The Australian Sea Horse is almost invisible when in the midst of seaweed due to the leaflike growths on its body.

Deer rescued from high water near Alexandria, by Steve Baker, Supervisor of Enforcement of the department of Wild Life and Fisheries (right) and men who worked with him during the recent floods in that part of the state, rescuing deer and other game.

Thermal truck load of bass to be liberated in Lake Dean, near Kendrick Ferry in Franklin parish, by the Louisiana State Department of Wild Life and Fisheries. Holding the bass, each of which weighed almost eight pounds, are Game Agent Homer Hodge (left) and State Representative P. C. Montgomery.

Mrs. Ruth Campbell.
Curator of La.Room.,
La.State Univ.,
GS. Baton Rouge, La.



# Facts About SPRING BURNING

DO YOU BURN OFF YOUR FIELDS AND FARMLANDS FOR ONE (OR ALL) OF THE FOLLOWING REASONS?

HERE'S WHY YOU SHOULD NOT!

IF YOU BURN TO MAKE CULTIVATION EASIER CONSIDER THIS — GROUND LITTER (DEAD LEAVES, GRASS, ETC.) IS NATURE'S METHOD OF RESTORING FERTILITY TO THE SOIL. DECAYED LITTER FORMS HUMUS THE MOST VALUABLE FERTILIZER KNOWN. DESTROYING LITTER BY BURNING — STRIPS THE EARTH OF ITS CHANCE TO REBUILD ITSELF. BURNING TO REMOVE GROUND LITTER FOR ANY REASON WILL EVENTUALLY RUIN A FARM!

MANY PEOPLE BURN BECAUSE THEY BELIEVE IT DESTROYS WEEDS. THE DEAD WEED GROWTH IS VISABLY DESTROYED BUT THE SEEDS BURIED IN THE GROUND ESCAPE. WITH OTHER VEGETATION REDUCED IN VIGOR BY THE FIRE AN ACTUAL INCREASE IN WEED GROWTH RESULTS!

ANOTHER POPULAR REASON FOR BURNING IS TO IMPROVE THE GROWTH OF GRASS. GRASS DOES LOOK "GREENER" WHEN SPROUTING FROM ITS FIRE BLACKENED SURROUNDINGS — BUT TESTS BY SOIL EXPERTS PROVE THAT BURNING MAY REDUCE THE STAND OF GRASS BY AS MUCH AS 50% IN ONE SEASON.

SPRING BURNING INFLICTS SERIOUS DAMAGE TO WILDLIFE. FIRE DESTROYS GROUND COVER WHICH GIVES WILDLIFE PROTECTION FROM THEIR ENEMIES AND THE WEATHER. THEIR FOOD SUPPLY AND NESTING PLACES ALSO SUFFER CRITICALLY FROM FIRE. LATE BURNING IN APRIL AND MAY DESTROYS NESTS, EGGS, YOUNG AND EVEN ADULT GROUND NESTING BIRDS.

SOME PEOPLE BURN OFF AS A PREVENTION AGAINST ACCIDENTAL FIRE. TO AVOID THE DAMAGE RESULTING FROM FIRE IT IS WISEST TO PLOUGH A FIRE GUARD. IT WILL SAVE YOUR FARMLAND FROM A SLOW DEATH CAUSED BY "BURNING UP THE SOIL"

POOR SOIL PRODUCES POOR PLANTS, POOR ANIMALS AND POOR MEN — BURNING HELPS MAKE POOR SOIL — DON'T BURN!